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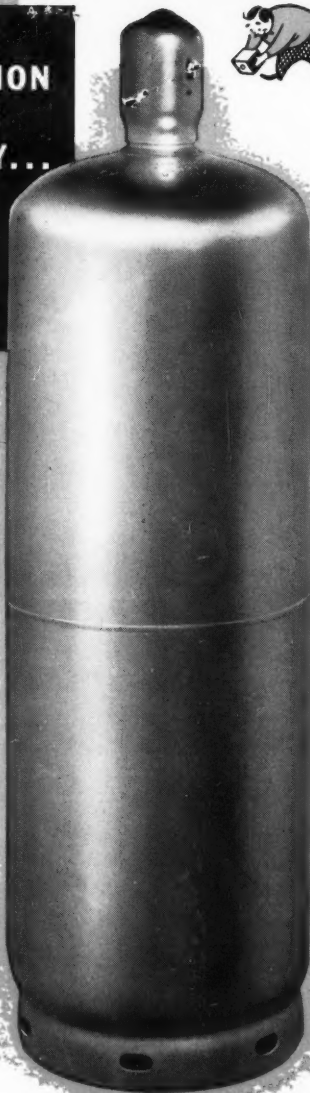
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JUNE, 1952

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Letters

HEADQUARTERS FOR LP-GAS INFORMATION SINCE 1931

SOUTH CAROLINA

Where can I get flexible hose with rubber ends for small gas appliances?

G.B.S.

The American Standard Installation of Gas Piping and Gas Appliances in Buildings, 1950, contains the following under Item 3-2-3, Use of Gas Hose: "Only appliances which are fully portable in nature shall be connected with gas hose. Appliances equipped with a control valve or valves which permit complete shutoff of the gas supply shall not be connected with a gas hose. This requirement does not apply to hand torches, gas irons and other equipment which require both mobility, possible only with flexible connections, and frequent and accurate burner control at the point of use. Gas hose should not be confused with semi-rigid tubing or appliance connectors of flexible metal tubing and fittings."

Names of manufacturers of gas hose for portable appliances which is approved for such use by the American Gas Assn. can be obtained from that association at 420 Lexington Ave., New York City.—Ed.

ARKANSAS

I have a 150 H.P. power unit using butane-propane blend fuel, running under extra heavy load on water well for a sand and gravel company. It runs about 10 hrs. daily using about 16 or 17 gal. per hour. About what should it use?

Would also like your advice on what size line to use for fuel as we are planning on putting a power unit on a platform 25-30 ft. high, leaving a

500 gal. tank on the ground. We have been using $\frac{3}{8}$ -in. copper tubing.

C.B.S.

The rate of fuel consumption seems satisfactory under the load conditions which you describe.

If the $\frac{3}{8}$ -in. tubing carries liquid fuel to the engine, it should be adequate when the engine is moved to the elevated location. However, if vapor is withdrawn from the storage tank, we would recommend 1-in. standing pipe or 1-in. O.D. copper tubing, Type K or L.—Ed.

MISSOURI

We have a customer who is putting in a dry kiln for oak lumber and is considering installing a Reznor unit heater with L. P. gas. The size of the room will be 10'x20'x12', and the walls will be insulated.

He will want a maximum of 300° heat. Would a heater of this type be practical for this job, and if so, what size would you recommend? Where could we get a thermostat that would operate to 300°.

If this type of heat cannot be used could you tell us what would do the job most satisfactory?

M.P.

An industrial type thermometer would best serve your purposes for 300° tempera-

● BUTANE-PROPANE NEWS welcomes letters from our readers, but it must be understood that this magazine does not necessarily concur in opinions expressed by them.—Editor.

ture control. Such thermometers are manufactured by the Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., So., Minneapolis 6, Minn.; Barber-Coleman Co., Rockford Ill.; and others.

It is difficult to figure the heat loss from the insulated walls of the kiln since thickness of insulation and type of structure is not known. We recommend that you consult with the supplier of the insulation to help determine the loss of heat through the walls.

Usually a large air heater with circulating fan is used for this type of work. A large volume of air recirculated and reheated is better than a small volume.

Although it may seem strange, humidity control is essential for high quality lumber drying. It is not possible to advise the amount of heat to be supplied until all facts regarding structure details, rate of drying, quantity of lumber, moisture to be removed, etc., are known.

L. P. gas properly applied will do an excellent and economical job of lumber drying.—Ed.

OHIO

Referring to F. W. H's letter in your "Letters" section for February, 1952, in which he inquires about the use of calcium chloride for the drying of LPG.

The answer given discouraged the use of the material, but I believe did not sufficiently warn against the proposal.

Calcium chloride in water solution is exceedingly corrosive to steel and to brass and copper. A few ounces of calcium chloride solution in the bottom of an LPG cylinder would very rapidly corrode it to the point where the cylinder would leak.

The danger is obvious. The proposal of using calcium chloride for drying LPG cannot be too strongly warned against.

D. A. Hill
Consulting Engineer

Thanks for giving this important warning to our industry.—Ed.

QUEBEC

We have installations of two 100-lb. propane cylinders connected with automatic change-over control and would like to know how many Btu's this equipment will develop at its maximum per hour at 0° F.

We would also like to know how many cylinders would be required to operate the following installations:

50,000 Btu heater.

35,000 Btu water heater.

116,000 Btu commercial cooking stoves.

J.L.M.

There are so many factors which affect the vaporization of L. P. gas within a cylinder or tank that it is nearly impossible to set forth any figures that will be consistent. Relative humidity, sunshine, shade, wind, load conditions, and other factors all affect the results.

A heat transfer rate of 2 Btu's per hour, per °F temperature difference between the outside air and the liquid in the tank per square foot of surface in contact with liquid is generally accepted for continuous service under the most unfavorable conditions. It would appear from this that a cylinder would have little or no vaporizing capacity in cold weather when it was nearly empty. Experience has shown, however, that even in your very cold weather a cylinder can deliver at the rate of 1 lb. per hour until it is empty of liquid L. P. gas even when the demand is steady. When the demand is intermittent, as for water heaters, cooking and even space heating, the capacity of cylinders may be 2 to 3 lbs. per hour.

Since 1 lb. of propane will deliver about 21,690 Btu's per hour, it seems reasonable that one cylinder in service would handle the 50,000-Btu heater, unless it was in an installation where it had to operate continuously, then 2 service cylinders, with 2 in reserve, should be used. The water heater by itself will be served easily by one cylinder.

The 116,000-Btu commercial cooking stove load is definitely intermittent and only for short periods will the entire load be full. In this case, 3 lbs. per cylinder per hour average should not be too high

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a rate. So, $116,000 \div (21,690 \times 3) = 1.78$ or 2 service cylinders with 2 reserve cylinders called for.

Assume that all the appliances you have listed are served by one system. The load totals $201,000 \div (2.5 \times 21,690) = 3.7$, or 4 cylinders in service with 4 in reserve indicated.

Such rates are generally satisfactory for most parts of the northern U.S. but should not be considered definite. Only actual operating experience will tell you what is right. As pointed out at the start, conditions vary both as to weather and load factors.—Ed.

OHIO

I have a 1951 A40 Mack with a 377 cu. in. motor. It has a 6.9 to 1 compression ratio and I would like to raise it as much as possible.

Would you please send me your recommendations?

W.E.

Concerning your question regarding the Mack A-40 truck with 377 cu. in. engine, we have the following information in our Butane-Propane Power Manual:

"The Mack factory supplies a 7.5:1 head for this engine, and this is the ratio which they recommend for L. P. gas.

"These L-head engines are frequently high compression by planing the standard heads. After cutting down, there should be at least 3/16" of metal left in the deck.

"Intake manifolds may be cooled by complete separation of the intake from the exhaust."—Ed.

TENNESSEE

Recently we have had several requests to install propane gas on river boats and boat houses. Due to the heavier-than-air characteristic of propane gas, we have been a little reluctant to recommend its use for this purpose.

If you have any safety rules or other recommendations for such an installation, we would appreciate getting the information.

F.W.H.

It is true that there are hazards connected with the use of this fuel on boats which have retarded its use in that manner, but when installations are properly made and ordinary care is exercised there need not be undue danger.

References I can give you regarding safety standards are: National Fire Protection Association Pamphlet No. 302 entitled "Fire Protection Standards for Motor Craft" (1951). The price of this pamphlet is 35 cents and it can be had from the above association at 60 Batterymarch Street, Boston, Massachusetts. H. A. Campbell, U.S. Coast Guard, 30 Vesey St., New York City.—Ed.

ALBERTA, CANADA

In computing weight for propane at 4.23 lbs. per gal. at 60° F. is this a computation for U. S. gal. or Canadian gal.? What would the weight of a Canadian gallon be if this is for U. S. gallons? There seems to be a slight difference here as to the true weight of a Canadian gallon.

When propane burns how much water vapor is produced? How much for butane?

For example, 1000 cu. ft. of natural gas produces about 1 gal. of water.

J.B.

The volume of a standard U. S. gal. is 231 cu. in. The volume of an Imperial gal. is 277.274 cu. in. Therefore, an Imperial gal. would contain $277.274/231 \times 4.23 = 5.0774$ lbs. of propane at 60° F.

Every pound of propane burned will produce 1.63 lbs. of water vapor and a pound of butane will produce 1.55 lbs. of water vapor when completely burned. A gallon of water at 60° F. weighs 8.34 lbs.

A cu. ft. of natural gas will produce about two cu. ft. of water vapor, so 1000 cu. ft. of natural gas will produce about 2000 cu. ft. of water vapor. A cu. ft. of water vapor weighs .0476 lbs. at standard atmospheric pressure and temperature $2000 \times .0476 = 95.2$ lbs. of water or about 11.5 U. S. gallons.—Ed.

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IT was a wise old sage who many years ago said that it was so much easier to do business with friends. Businessmen are a much happier lot when they follow that advice not only in dealings with their customers and suppliers but when this friendship is extended to their competition.

The term "friendly competition" is often an abused one and frequently is employed only "with tongue in cheek." In our industry many L. P. gas men have looked upon the gas utilities hardly in a friendly fashion and sometimes with equal scorn given the electric companies.

While it is easy to understand the feelings of our industry toward the expansion of natural gas lines along with population shifts farther into the fringe areas, which have given our industry the bulk of its business, there is a long range viewpoint that should be considered. Some sound thought on this subject is presented in an article elsewhere in this issue entitled: "You Can Live and Thrive with Natural Gas." We urge you to read it carefully.

The apparent advantages offered to consumers by natural gas may result in the LPG dealer suffering immediate losses. However, in the long run, the advent of natural gas, as the author of the article points out, may prove a milestone in the battle against Reddy Kilowatt.

The advent of gas lines beyond their present limits in any given area can be a profitable one to the LPG dealer. Through him the consumer may be held to gas rather than turning to another fuel for heating or cooking. This may be reflected in increased gas appliance sales for the dealer.

The gas utilities value our industry for holding the line against competitive fuels and electricity. They wish to be our friends.

For many years to come there will exist a wide market "beyond the mains" which rightfully will be yours to enjoy. Individual perseverance of the dealer will keep it so. But there exists today still wider markets for LPG to fill the customer gaps left by pipeline extensions.

The fast growing "balanced load" program is unearthing for LPG dealers many new outlets for butane-propane fuels. Industrial, commercial and agricultural utilization of LPG are fields our industry can exploit with less danger of loss from competition outside the industry. Growing demands for tractor and automobile conversions to L.P. gas is opening up a large market for the dispenser of LPG, not available to either gas or electric utilities.

Tremendous growth of our industry in the past 20 years, despite encroachments of pipelines and electric competition, certainly indicates optimism,

rather than pessimism, for the future.

We should join hands with our utility friends to make certain that gas and not some other fuel is the choice of our customers within and beyond the mains in the years ahead.

Deep in Governmania: A Navy man in the Pentagon recently received an official communication from a colleague containing, among other terms, the word "AUTHAB." Attached to the message was another, reading, "The abbreviation AUTHAB is the Authorized Abbreviation for Authorized Abbreviation." (from *The New Yorker* magazine)

One of the finest ways the liquefied petroleum industry's story is being told today is through the nation's press in a steady flow of news and feature stories, many of them placed in various local and national publications through efforts of the L.P. Gas Information Service. But it's only the beginning of the big job to be done in publicizing the LPG industry to the general public.

State, regional and local groups of LPG dealers, while cooperating and benefitting from the national program, nevertheless can tackle the job more earnestly in their own areas. They are familiar with local problems, know their local editors and publishers more intimately and can develop news stories and interesting articles for publication which will directly benefit them.

An outstanding example of what can be done regionwise appeared in two midwest farm papers during March. With the help of the L.P. Gas Information Service, the *Kansas Farmer* and the *Missouri Ruralist* featured special editorial sections concerning LPG for better living and farm operation. The *Kansas* paper

devoted 11 pages to telling the industry's story which included a sizeable amount of manufacturer-distributor advertising.

Important, however, is that a portion of this spread was prepared by the local staffs of these papers, indicating their willingness to cooperate with the industry, proving that such cooperation can be sought out from other publications in an effort to spread the good word about LPG far and wide.

Successful promotion of these farm paper presentations indicates also that industry dealers and manufacturers alike can develop excellent material for other farm and small town papers covering various uses of LPG. Or they can suggest story leads, deserving of more widespread coverage, to the Information Service offices in Chicago.

The industry's growth has been so rapid in the past few years that possibly many of these publicity "angles" have been neglected at the dealer level. We must remember that the LPG industry has many a good story to tell and they must be told often and well.

Every dealer should develop long period programs for intensely canvassing his territory for new sales—for domestic, farm, commercial, and industrial customers. The amount of new business that can be had through hard sales effort is almost beyond conception, but if you don't go after it aggressively, the electric boys will grab off more than their share, for they are really working.





INSURANCE man talking before meeting of butane-propane dealers: "There is no insurance policy that will protect you against the loss of confidence of customers and potential customers, in case an accident should happen. Every accident is a direct loss to every dealer all over the country."

Back in the days when organs were pumped by hand, a very famous organist, leaving the platform after a fine performance, confided to a group of his admirers, "I really did some beautiful work this evening. I don't know when I ever played better."

The boy who had pumped the organ scowled, but said nothing.

The next evening the organist pushed on the keys, but there was no sound. He tried again, with no response. He glared at the pumper, and signalled for wind.

The boy grinned and replied, "Say 'WE', mister!"

Talking safety leads to thinking safety, and thinking safety leads to the practice of safety.

A dealer in Oregon claims his longest route is 15 miles, and that his fuel deliveries average 63 gal. per truck mile. A little quick figuring shows that many dealers are averaging only 13 to 15 gal. per truck mile. That could make the difference

between real prosperity and just getting by.

Mr. and Mrs. R. W. Schaefer, owners of the Royalty Chinchilla Ranch, Bedminster, N. J., provide the best of everything for their expensive livestock, including automatic gas heaters burning propane. Chinchillas require steady, even temperatures to produce large, healthy litters. Extra production is important, since the animals now sell for from \$1500 to \$2000 per pair. Have you called on your local chinchilla breeders? (P.S. Mr. and Mrs. Schaefer like steady, even temperatures too, so they have installed the same type of heaters in their home.)

Winther Bros., of Fresno, Calif., the first company to install a million dollars worth of butane-propane carburetion equipment, holds evening LPG carburetion schools for the mechanics in the surrounding territory. Paul Holcomb, instructor, reports attendance running as high as 100 students per school, and students driving as far as 75 miles to attend, then driving home that night to be on hand for work the next day. Fresno was the "cradle of butane carburetion." The above would hardly bear out the contention that the need for carburetion instruction in our industry is past.

The Bureau of Reclamation, the Army Engineers, and the Rural Electrical Administration spend tremendous sums promoting the generation and distribution of publically financed electric power. That's competition for you, paid for in part by your top dollars. You can do three things about it: (1) keep the heat on your senator and your congressman; (2) support the work of the LPGA and related National Committee for L.P. Gas Promotion; (3) team up more closely with the efforts of the public utility gas companies to buck electric competition.

There is just so much moisture and so much fertility in the soil. When weeds grow with crops, then crop growth is reduced in proportion to the growth of the weeds. Weed control results in larger crops, and in many cases, better prices. We need to know more about the effectiveness of flaming in the control of the common weeds. State associations would do well to work with their state agricultural experiment stations to develop facts on weed control by flaming with propane gas.

It now appears that there will be no machinery shortage to hold back farm production this year. Some tightness could result from the steel troubles, but inventory in dealers' hands, and production for which the factories already have materials, are believed to be adequate for nearly all of this season's requirements.

Now they are taking all of the romance—and most of the dirt—out of blacksmithing. No coal to shovel, no clinkers to dig out, no ashes to clean up, no soot in the smithy's face. Just a nice clean forge, fired with propane and blown by electricity.

The village smithy can now sharpen a third more plowshares with half as much work and wear a clean shirt like any other technician. Makes a nice gas load for the dealer, too, with heaviest usage during the spring and summer months.

There are two kinds of lazy people—those who make it possible to live with less work, and those who just live with less work.

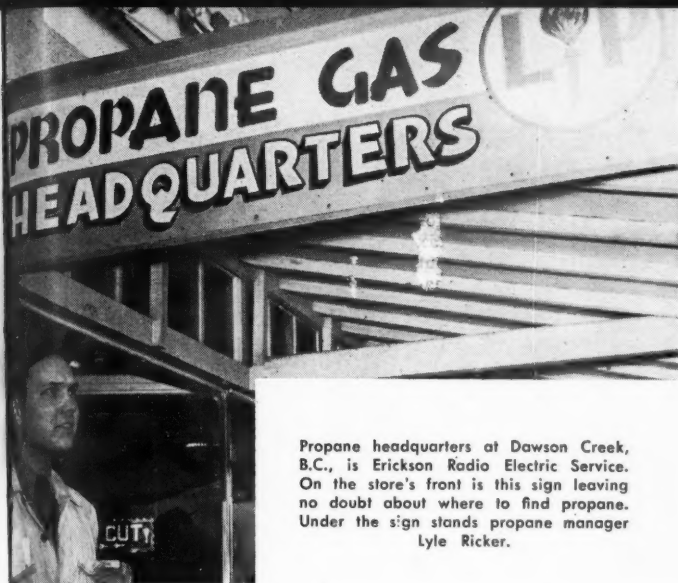
Liquefied petroleum gas is being used to speed the cotton ginning process by 25% in Wilson, Ark., center of what is believed to be the largest cotton farm in the world. The L. P. gas, butane, is used to dry the farm's thousands of bales of cotton for ginning, and also serves as fuel for heating and cooking in the town's homes. This is another instance where L. P. gas seems to be the all-purpose fuel.

Comfortable trailer homes with L. P. gas fuel systems proved a Godsend to Missouri-Kansas flood victims. Trailerites regularly roaming the country cook their meals, heat their traveling home and hot water with L. P. gas. Removable fuel containers that look like big thermos jugs can be filled as needed.

Portable generators in North Dakota have L. P. gas burners that vaporize liquid silver iodide to stimulate rainfalls. Cylinders or "bottles" of the fuel are hooked up to the rain-making machines that can be moved to chase the clouds.

Carl Abell

BUTANE-PROPANE News



Propane headquarters at Dawson Creek, B.C., is Erickson Radio Electric Service. On the store's front is this sign leaving no doubt about where to find propane. Under the sign stands propane manager Lyle Ricker.

Canadian LPG Boom!

Correspondent finds new dealers, big hopes for propane in northern U. S. and Canada

The first of two articles from a BUTANE-PROPANE News roving correspondent who surveyed first-hand the fast-growing Canadian and northern U.S. propane market. Mr. Joseph uncovered the hopes and problems facing these dealers, many of them operating in virgin territory. The second article in this series will appear in next month's issue—Editor.

PART I

ONE day last winter, when the mercury was doing strange things in thermometers from Montana to Alaska, I climbed aboard a truck, bound from Great Falls, Mont., to Anchorage. Along the way I stopped off to visit L.P. gas dealers, and to soak up some facts and statistics about butane-propane's future—and present—

By JAMES JOSEPH



Typical Western Canadian dealer. George Lapierre, manager, and Virgil Fiksdal, Propane Services Ltd., Calgary, Alberta, fill 100 lb. cylinders at their bulk plant near Calgary.

from our northern Mountain states to the high ranges of Alaska. I found it to be a propane story most of the way.

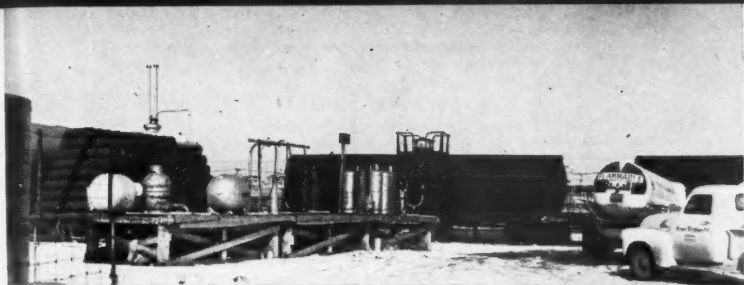
In Alberta there are now four propane distributors, and many a farm is converting from gasoline and diesel to propane. The merchandising finger of propane reaches half-way up the Alaskan highway, and there are prospects of big things for propane there in years to come.

Oil companies, presently prospecting the northern bleakness of Alberta for what they believe will be some of this Continent's largest petroleum reserves, have put propane to use in heaters, camp ranges, and even in trucks. And everywhere, paralleling the big U.S. bu-

tane-propane boom, is a Canadian-made boom all its own.

J. J. Hogan, manager of the propane division for Stewart Petroleum, Ltd., said in Calgary that it's the farm load—heating in winter, tractors in spring and summer—to which western Canadian dealers are looking for load balancers. Dealer sales are booming for the four Alberta propane distributors: Luna Gas Ltd., Edmonton; Canadian Propane Ltd., Camrose; Stewart Petroleum Ltd., Calgary; and for Sturdie Propane Ltd., Lethbridge.

"There's a big—and growing—expansion in tractor conversions here in Alberta," Hogan said, "It should be the balancing factor which dealers here are seeking." Already propane is widely used in



Stewart Petroleums Ltd.'s cylinder filling and storage yard at Calgary, Alberta. For them, a big present—even greater future.

Alberta. It heats livestock barns; dries wheat, and is coming into its own as a vehicular fuel.

At Dawson Creek, British Columbia, which marks Milepost "1" (the start of the 1600-mile long Alaskan highway) there's a propane dealer. As in many parts of Canada and the far-north, propane is not a full-time job as yet. One thing, traffic isn't heavy enough now and in some of these regions farming is still too scattered to make sizeable tractor fuel volumes. In Dawson Creek, propane is handled by Erickson Radio Electric Service, and Lyle Ricker is the propane manager. One hundred pound and 20 lb. cylinders are trucked in from nearby Grand Prairie, where there's a Canadian Propane Ltd. bulk plant with 1000-gal. storage.

"We've been in here with propane just three years now," Ricker said, "and darn it, if Dawson Creek didn't become the first in this area to get natural gas with a field not too far from town. But natural's only in town, and there are plenty of farm and highway applications for propane. There are a lot of road houses up the Alaska highway and they're growing in size and importance."

Some American trucks plying the Alaska highway have converted to propane, but they find fueling stops pretty far between. "But the biggest problem with both truck and tractor conversions here is that we can't seem to get American-made conversion units. Most of the Canadian distributors don't handle them," said Ricker.

Another problem for Ricker right now is that, without a bulk delivery truck, he can only deliver cylinders out of town. Another draw back is lack of a bulk storage unit, even a small one. To haul a tank in from the States, over 1000-miles of road (from Great Falls, let's say) would cost a small fortune in transportation.

Some skid-mounted shacks, which the oil prospecting crews are using in working the wintertime northern Alberta muskegs, are equipped with propane stoves and heaters.

Ricker's territory, besides an area about 25 miles around Dawson Creek, extends 101 miles up the Alaskan highway—clear to Ft. St. John, and on to Blueberry Lodge, one of many fine Alaska Highway roadhouses, run by Dot and Dave Pierce. The lodge is located on the site of a former Royal Canadian

Mounted Police traffic control gate which operated during the war years.

Blueberry Lodge has installed two, 100-lb. cylinders, with another as spare. The Lodge's refrigerator, range and hot water heater operate on propane. Usually the Pierce's bring their empty cylinders to Dawson Creek for refilling, but Ricker has gone up on occasion to resupply them.

I lost count during the eight-day, bitter cold truck trip up the Alaskan highway, but there are probably some 40 highway lodges in operation, all of them potential LPG customers. Many of these lodges have their own gasoline-driven light plant—which could be converted to propane. And a few of them have already converted, particularly

those near the terminuses of the highway. These people in between are pretty much out of luck propane-wise right now—but progress will catch up to them eventually.

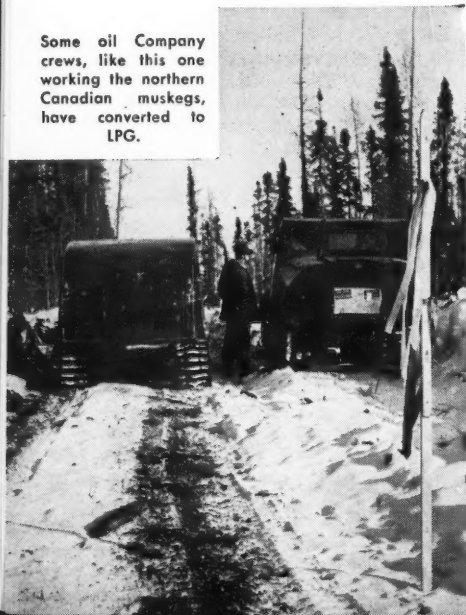
One factor that has worked a hardship on Canadian dealers is the relatively high price of propane. Right now, the chief propane producer in western Canada is Imperial Oil Ltd., with refineries at Edmonton. The refinery draws its oil from the famed, and nearby Leduc field, which came in five years ago and shot Canada into the ranks of leading world oil producers.

The average retail price of an imperial gallon (20% larger by volume than the U.S. gallon) is 17 cents; wholesale, the imperial gallon costs about 9 cents. However, in Canada as elsewhere in the prairie states, transportation costs figure into the total scheme of retail prices, and that's one reason for the 17-cents an imperial gallon retail tag.

There's no competition from electricity, not only because electric power costs more, but most farmers must pay to have lines extended to their farms. But natural gas is booming—and far from diminishing, the boom seems bent on larger expansion in the next several years.

Some idea of western Canadian propane expansion comes when you consider that one typical distributor, Stewart Petroleums, Ltd., was organized only two years ago, in July 1950. Actually, the company hasn't been operating as Stewart much over a year, having bought out Lion Oils Ltd., a small propane

Some oil Company crews, like this one working the northern Canadian muskegs, have converted to LPG.



distributor, in April, 1951. Already Stewart has four branches: Calgary, the home office; Edmonton, Red Deer and Lethbridge. Stewart reports propane sales up 50% over 1950, and for the first three months of 1952, up 100% over last year.

In Calgary, 20 taxicabs from one company alone have converted to propane, and others are following. Edmonton's municipally-owned transit line has converted its buses to propane, although it still runs a number of electrified trolleys. A fleet of dairy trucks in Calgary has converted to propane. This is somewhat unusual since milk is more often delivered by rubber-tired, horse-drawn wagon there.

Propane for Coal Trucks

At coal strip mining operations in Alberta's Crow's Nest Pass, trucks hauling anthracite are propane fueled. In the Canadian Rockies, where higher compressions are needed to negotiate steep grades, many a truck has converted.

Best news for southern Alberta dealers is the opening of St. Mary's dam and its adjacent irrigated acreage, tabbed for fruit growing, particularly apples. There should be plenty of LPG applications here, Alberta dealers believe. Impressive is the number of plumbing shops and small manufacturers who have turned to LPG for use in torches and the like. Still, one of the problems of cold weather applications is the need for steam coils and liquid withdrawal systems, and for vaporizers on all units, especially those operating out-of-doors. In 1954, it is rumored, Canadian Gulf Co. may have LPG production in

LPG is being used in the winter muskeg operation to run torches, as illustrated here by crewman, to melt ice so that work can go on.

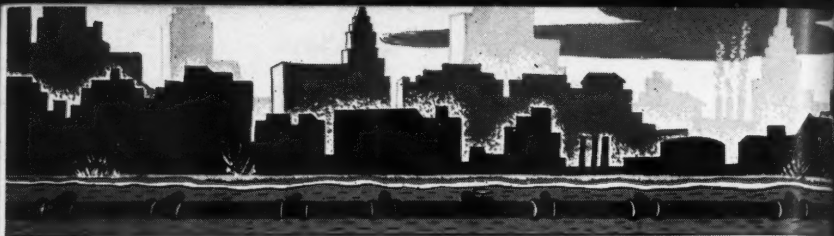


the Pincher Creek area, in southern Alberta, close to the Montana border.

In Alberta there are two producers of LPG. One, already mentioned, is Imperial Oil Ltd., from the Leduc field. The other is Western Propane Ltd., which produces propane from its Turner Valley field southwest of Calgary.

Summed up: The Alaska highway is opening up the entire northern area of Canada, including the fabulous Yukon Territory, northern British Columbia and northwestern Alberta. The Alaska highway is still the fastest route to Alaska and the U.S. government is unofficially subsidizing this fast-growing truck route. In so doing it is opening up not only Alaska, but also Canada. LPG is steadily, though slowly, trekking up the highway. In Canada, the talk is of "boom." And one new oil find has followed another. Despite the rise of natural gas in western Canada, the fields for LPG are also expanding.

Yes, LPG's Canadian future really looks bright.



You Can Live and Thrive With Natural Gas

By W. R. SIDENFADEN

Suburban Gas Service, Upland, Calif.

IT IS not difficult to understand the present concern of the liquefied petroleum gas industry about the effect on our business of the introduction of natural gas into many of our areas.* Possessing the immediately apparent advantages of lowered fuel costs to the consumer and uniformly higher quality over mixed and/or manufactured gases previously used—backed by tremendous capital resources for the aggressive expansion of pipeline distribution facilities—the invasion of this new fuel may have some early and painful consequences upon some areas.

But it is my sincere hope that in a short period of time, we will recall the advent of natural gas as

a milestone in the battle against the forces of electric competition.

We have lived and thrived with natural gas for more than 20 years in Southern California and the record shows that there are today more dealers, more customers, more domestic gallons of LPG sold in our area than was the case 5, 10 or 15 years ago.

This has been true despite the fact that we have seen the construction of two major pipelines importing additional natural gas into our area within the last few years. At least two more such pipelines now are beyond the drawing board stage and yet we, in Southern California, see no reason for pessimism when we look into the future. Certainly with the proven talents and aptitudes in this liquefied petroleum gas business, as indicated by the splendid record of growth in the Northwest, it is possible to adapt oneself readily to this new, but

*This article is a condensation of remarks made by Mr. Sidenfaden before the annual convention of the Northwestern States LPGA in Seattle, Wash., April 25, 1952.

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friendly, competitor for an all-out drive against the ranks of inferior fuels.

Any discussion of the effects of natural gas must necessarily be prefaced by an examination of its advantages to the consumer:

- (1) Natural gas provides fuel users with substantially lowered costs.
- (2) Natural gas is of excellent quality, and its superiority over mixed and/or manufactured gases previously used seems readily apparent to the consumer.

These advantages of natural gas place it in an enviable and well-deserved position of pre-eminence in the gaseous fuel field, and any attempt to contradict or to dispute its position will be fruitless and profitless.

Having these inherent characteristics, and with ample capital available, natural gas lines may be expected to penetrate many areas where homes and people are closely concentrated. To illustrate, I quote from the gas main extension policy of one of the large California utilities:

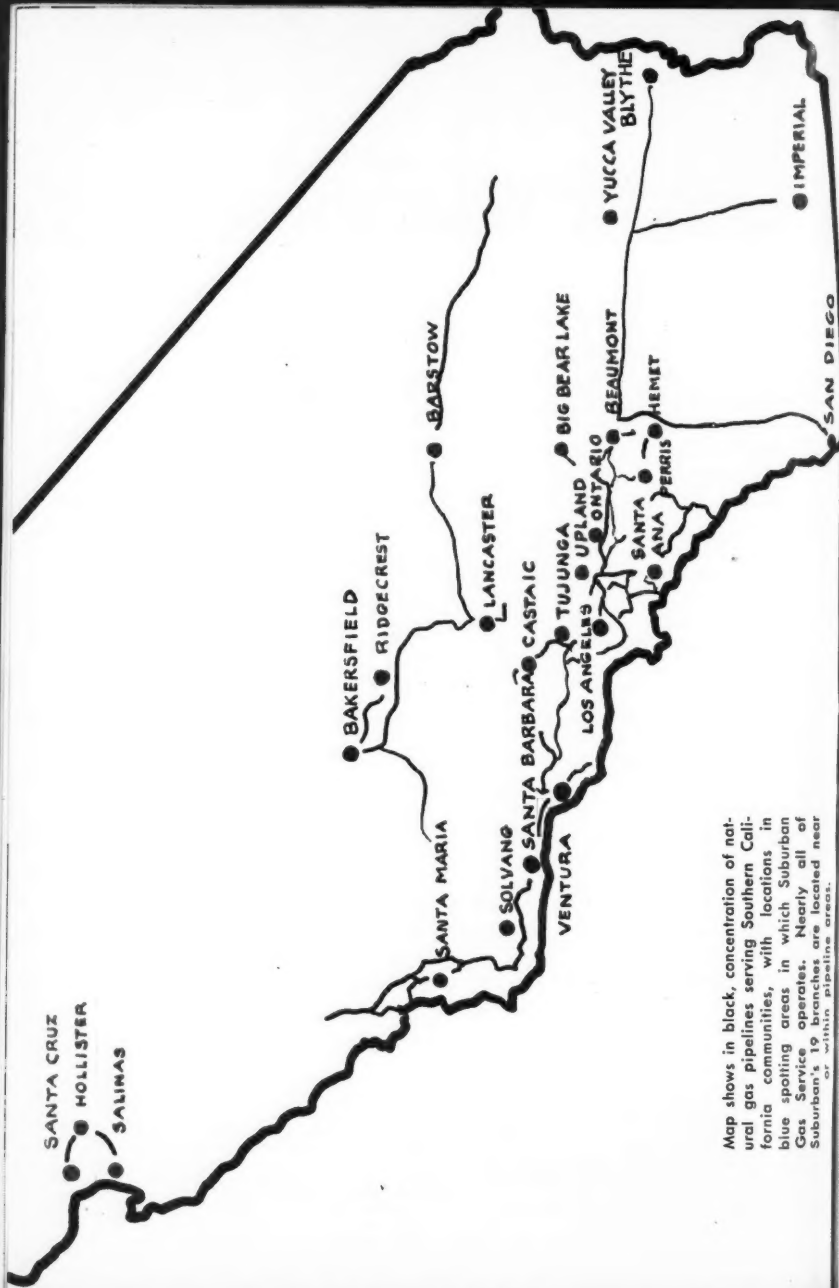
"The company will extend its mains a distance of 175 ft. for each applicant for gas service whose annual billing as estimated by the company will be \$40 or less. For each applicant whose billing for the first year of service as estimated by the company,

will exceed \$40, the company will provide, in addition to the above allowance, an investment in main extension equivalent to four times the amount by which such estimated first year's billing exceeds \$40 per customer. No free allowances for a main extension will be made for a customer whose only major use of gas is space heating."

Generally speaking, any residence using gas for cooking, water heating and refrigeration will qual-

Of particular concern to LPG dealers in many parts of the country today is their relationships with natural gas utilities. In a number of sections dealers and utilities have found it mutually advantageous to work together in building greater gas loads in the face of competing fuels and power.

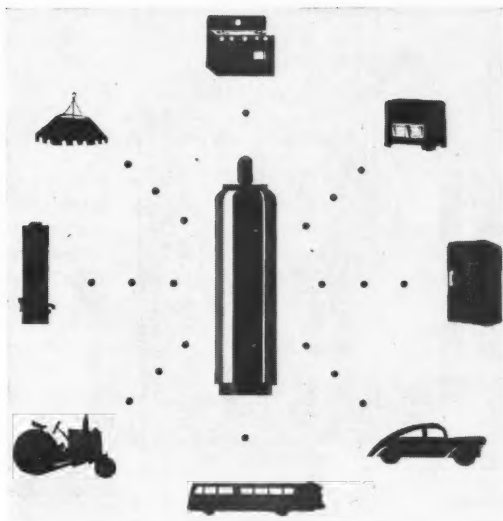
On the West Coast a number of utilities are cooperating with LPG dealers in helping to build more business for each other. Mr. Sidenfaden is prominent in the LPG business and has had a large amount of experience in working closely with the utility gas business. His opinions concerning this important phase of our business are presented here to enlighten dealers in other parts of the country, faced with this same problem, in the hopes of creating a better understanding between the LPG dealer and utilities.



Map shows in black, concentration of natural gas pipelines serving Southern California communities, with locations in blue spotting areas in which Suburban Gas Service operates. Nearly all of Suburban's 19 branches are located near or within pipeline areas.

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A tremendous potential exists for LPG's divergent uses, many not feasible for natural gas such as engine fuel and agricultural uses. Both LPG and utility gas can hold the line for gas appliances.



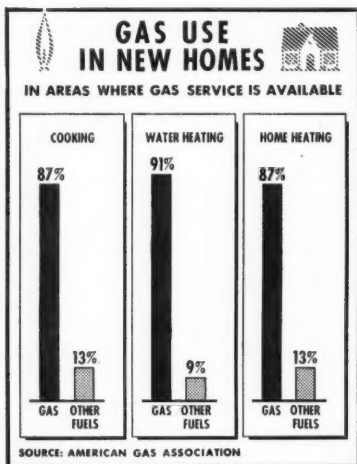
ify under the 175 ft. allowance of this utility. Thus, if portions of any individual area are in the path of projected natural gas mains, and if numerous customers are closely adjacent to each other, I think we can anticipate the loss of such consumers to natural gas. Clearly, however, the larger portions of the territories served should remain an exclusive LPG field.

The profitable extension of mains must cease in fringe areas, and as a practical result, the rural, farm, and resort domains should continue to be the exclusive province of the LPG business. When you add to this invulnerable, domestic field the tremendous potential that exists today for our fuel for internal combustion engines, and for many other increasing and divergent uses

not feasible for natural gas, I see no reason to look ahead with anything but optimism.

About three years ago, in one of our neighboring states, the importation of natural gas had a quick and serious impact on the liquefied petroleum gas business. I have been well acquainted with the companies in the affected areas for a long time; and I can report they have virtually restored their early losses, have expanded their sales through new fuel uses, and are again busily buying tanks.

I stated earlier that we would recall the advent of natural gas as a milestone in the battle against electric competition. In the light of the experience of those of us who have worked with this friendly



competitor over the past 20 years in Southern California, I sincerely believe that this will be true.

We have talked about losing customers in densely populated areas; let us now weigh such possible losses against the gains that will be yours.

First, natural gas will be the clincher which will swing the customer now wavering on the verge of electricity, back to the enthusiastic use of gas cooking, gas water heating, refrigeration and space heating.

Second, natural gas will be the final blow to move the customer presently dissatisfied with his electric range, electric water heater or refrigerator to the use of gas appliances. There are literally thousands of such consumers in most areas.

Hence, while natural gas may take some customers away, never

forget that it is equally industrious in building up for the future a tremendous number of potential LPG accounts. Every gas appliance user is a possible L. P. gas consumer. In Southern California, the result of such activity on the part of gas utilities seems to have many times outweighed the losses occasioned by gas main extensions. With day's increasing trend toward suburban living, I earnestly feel that these two factors alone will be enough to outweigh the customers which may eventually be lost.

Third, natural gas companies have a real appreciation for your particular importance to their own related industry. No enlightened gas executive will for a minute forget the painful "20's" when customers moving beyond gas mains turned to the use of electric appliances. In many cases, these customers have been recaptured only after a most costly and elaborate sales effort, having in the interim lost sight of the advantages and superiorities of gas.

Gas Benefits from LPG Growth

The tremendous growth of our business since 1930 has been of untold value to the natural gas industry by eliminating this situation, and we therefore enjoy their confidence and cooperation. I suggest that you ally yourself with them at the earliest possible moment. I am sure you will be welcome and will receive their assistance beyond your present anticipations.

Fourth, and of most importance in my estimation, is the powerful advertising force which should accompany the entrance of natural

gas into an area. These advertising dollars will be wisely and generously spent and should logically be accompanied by substantial additional monies from our own business. This brings me to my pet peeve.

Failing to Employ Advertising

I think we, in the liquefied petroleum gas business, are failing in the use of this proven media for the creation of new and the preservation of old customers. I believe it truthful to say that any industry merchandising a product of the quality and superiority of I. P. gas, which consistently tells its story through well designed advertising, will never succumb to competition in the field of American business. We are engaged in a ruthless battle against an electrical industry spending literally millions of dollars in this fashion each year. We also are confronted with the fact that our own tax dollars are being lavishly spent to sponsor and finance the rural electrification program of a socialistically inclined administration.

Lest we be inclined to minimize the extent of this paternalistically financed competitor, let me quote portions of a recent *Wall Street Journal* release:

"Washington—The Rural Electrification Administration has approved the second highest single loan in its 17-year history, \$15,717,000, to the East Kentucky Rural Electric Cooperative Corp., of Winchester, Ky.

"REA was set up under the department as a government lending agency to help finance electric power in rural areas.

"The latest loan to this cooperative

is in addition to previous loans of \$12,265,000.

"Loans are for 35 years with annual interest of 2%. REA has approved loans of about \$2,502,021,833 to 1077 borrowers since 1935."

Our great strides in the development of the LPG business in the face of such competitive forces have been made largely through the energy and persistence of the individual dealer in carrying the story of the quality and economy of our product to the consumer.

I strongly urge that each of us think seriously about the necessity of expanding advertising budgets, of joining our story-telling dollars with those of the natural gas industry. In my humble conviction, the battle can and will be won principally by such mutual effort.

Canadian Oil Heating Industry Advised to Develop LPG Uses

A member of the Canadian parliament suggested to a recent meeting of the National Oil Heating convention at Toronto that the oil heating industry look into the use of liquefied petroleum gases for small communities not served by natural gas lines.

Carl O. Nickle, member of Parliament from Calgary West, said Alberta would eventually permit export of her natural gas and it would compete with oil in Ontario and Quebec. He reported that Canada's consumption of petroleum is increasing faster than any other nation and may reach 750,000 bbls. a day by 1960.

By 1954, he noted, Canada will be producing more oil than its refineries will be able to handle.

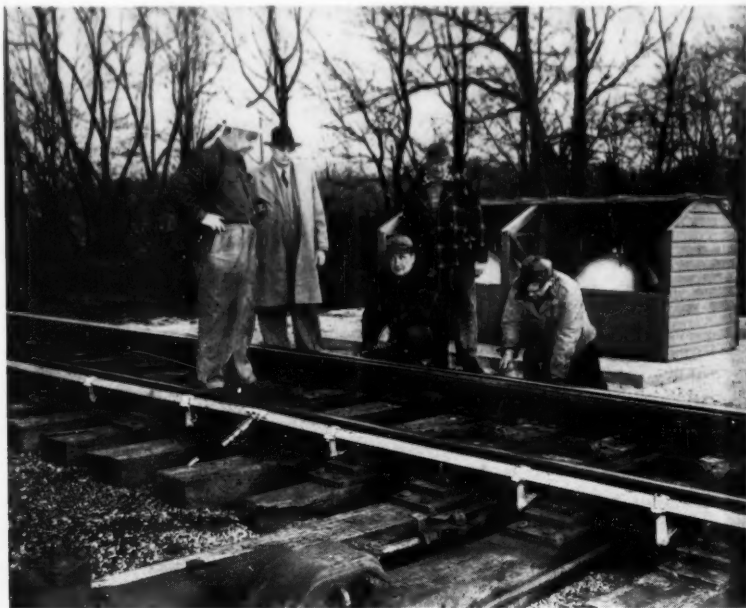
Propane Switch Heaters Part of R. R. Plan

THE use of propane for keeping railroad switches thawed in winter has been adopted by the Chicago South Shore & South Bend Railway, operators of a fast electric line running between Chicago and South Bend, Ind.

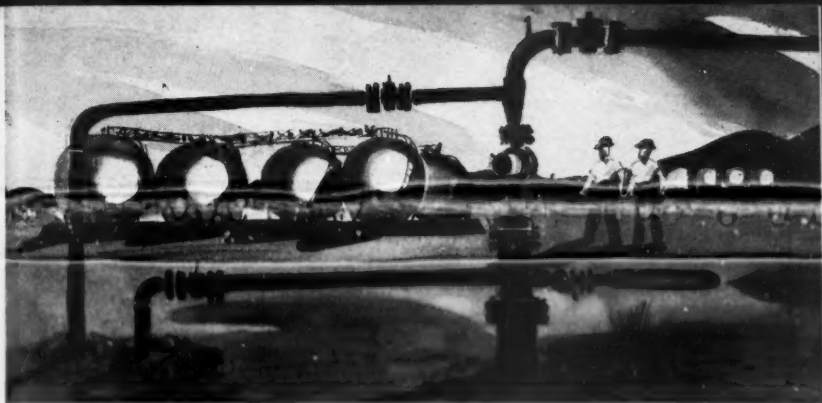
The initial installation of a switch heater is shown in the accompanying photograph. The propane supply tanks appear nearby.

This railroad switch heater installation was made by Modern Equipment, Inc., of Michigan City, Ind., operated by Wayne G., Harry W., and Gaylen Frey. They anticipate that the successful operation of this first unit will result in an order to equip similarly the entire line of this railroad, which serves the rich Calumet and lower Lake Michigan areas of northern Indiana and Illinois.

This is one of the most densely populated sections of the United States and the rail line is endeavoring to modernize its facilities to serve it more adequately.



Propane railroad switch heater being lighted for first time on line of Chicago South Shore and South Bend Railway. Shown are Earl Braginton, signal department of railroad; Emerson Houts, Modern Gas Equipment, Inc., which made the installation and supplies the fuel; John Potempa and Paul Hoffman, of railroad maintenance department, and an unidentified workman.



Aboveground view of pipelines to underground storage

Installation and Operation of Underground Storage

**Adequate storage essential for continued growth of
liquefied petroleum gas industry**

PART I

THE liquefied petroleum gas industry has reached a milestone in its growth cycle which has been an unending spiral of growth, ever mounting upward with a predicted volume of 4.5 to 5 billion gallon sales in 1952. This increase in growth brings out the need for adequate storage facilities more and more.

First there must be storage to assure deliveries for unpredictable winter demands, and the increase in the number of customers makes the ratio problem greater than it has ever been. The ratio demands are shown to be nearer 6 or 8 to 1 than the strived for of $1\frac{1}{2}$

to 1. The overall picture comes out near the $1\frac{1}{2}$ to 1 because that is the best the industry can now do in supplying the drastic peak demands.

But if storage was available, the peaks could and would be met, reviving the true ratio. The bright side of this picture is that volumes will shoot up and substantial profits will be revealed because of the increase in volume.

Many dealers have reached a stalemate in selling new prospect volume since they are having trou-

By G. H. BILLUE

Security Underground Storage Co.,
Wichita Falls, Tex.



Typical aboveground storage tanks of 30,000 gal. capacity in use today.

ble supplying their present customers in peak demand periods; and, since these shortages are embarrassing to them as dealers and to the industry as a whole, they have been reluctant to take on any more business which would only increase these problems of peak demands.

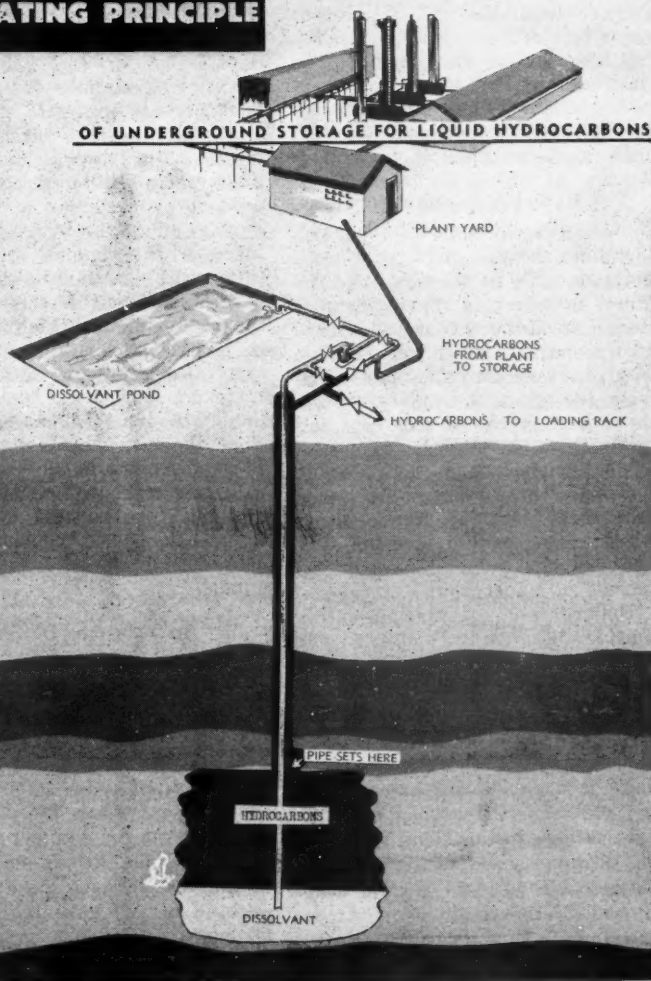
It was thought for some time that the only answer to this problem was steel storage on the level of the consumer. This was approached from every angle but the uneconomics of the whole idea simply would not keep its heads above water, and it will take further study and combination with other methods to make it a workable factor. Proper financing, coupled with the now successful underground storage of LPG, seems to be the solution of this heretofore vexing problem.

Underground storage was first installed at the production points. The primary reason for this was

that a proper section, drilling equipment, and products were available to test without too much cost. These successful tests were conducted and shown to the producing section of the industry, and as it is with all new ideas and

The advantages of underground storage are numerous, not the least of which are costs, both initial and maintenance; savings in ground space; savings in the use of steel; and the elimination of above ground operational hazards. The practicality of artificially formed underground LPG storage space is established by the performance to date of a few systems in this country. Here is the first of a two-part article concerning the problems encountered in installation and operation of underground storage by a prominent consultant to the industry. Some of the material presented here has been condensed from a paper delivered by Mr. G. H. Billue before the annual convention of the Natural Gasoline Assn. of America at Houston, Tex., Apr. 30-May 2. Reports of the meeting appear elsewhere in this issue.—EDITOR.

OPERATING PRINCIPLE



Cutaway view of underground storage operation for liquid hydrocarbons.

techniques, it was slowly adapted to the use at these points. There are now thousands of barrels of storage available and in use at these points. This proved the adaptability of the idea, and did so in a careful and economical manner, which will be of great value to the industry and make the further expansion possible.

Two Market Area Storages Made

During the summer of 1951, two installations were made at the market areas, one in Michigan and the other in Louisiana. These installations proved the wisdom of storage at the market, as it was possible to utilize tank cars all summer and move the products to market when there were plenty of tank cars and products available; otherwise wasted without storage facilities. At the same time, jobbers and other producers were installing units which have proven, beyond any question, the adaptability of the process of underground storage.

Underground storage requires considerable capital outlay per unit. However, the cost per barrel is less than 1-10 the cost of steel storage, and also very little steel is used which is advantageous during this period of steel scarcity. Since there is a substantial capital outlay, provisions have been made to finance these installations and make the storage space available on a rental basis whereby several dealers may store their products in one installation, paying for the space they contract for in the preceding summer.

The storage company with which

I am affiliated plans to buy products to be placed in storage and made available with preferences to those customers that have products stored. From the above plan, it will be feasible for one, two or more dealers to combine their storage and purchase contracts, if they desire, purchase their products during the off peak, which will improve their ratio standing, move this product by tank car or transport during off peak, which will also increase the amount of product they will be entitled to on a 1½ to 1 ratio, and enable them to meet the peak demands, which will greatly increase their volume. At the same time they can take on new customers with the assurance that they will be able to serve them when the heavy loads do come on. This movement in off peak season will make more cars and transports available for the peak load hauls, as large volume of the normal products will already be at market terminals.

Six Industries Outlined

Underground storage should be of concern to several industries. In outlining them I have come up with the following six:

(1) *Railroads* can increase their haul by from 100% to 400%. Any time you move any amount to the market area in summer you can thereby double the volume you haul in the year because these cars can be used to full advantage in winter hauls.

(2) *Producers*. First the producer saves products he normally doesn't produce, that is, he de-

creases oil rate, eliminates refrigeration or does a sloppy job or fractionation which lets products go over into residue gas. Saving and selling products means money to a producer and will also make products available to a desperate jobber, distributor and consumer.

(3) *Royalty owners* are paid on the amount of products produced and marketed. Without adequate storage this means he is deprived of from 25% to 75% of the income from the "other products" clause of his gas sales contract. Sooner or later royalty owners are going to become insistant that a better job of saving and selling is done before he signs a sales contract on his gas.

Jobbers Rate A Bouquet

(4) *Jobbers* were conceived and born to handle excess products. They are the fellows that a bouquet should be given to for promoting and stimulating demands which resulted in sales and have built the business to what it is today and what it will be tomorrow. But in order for them to keep up a full head of steam they must have products to sell. Their take or pay contracts are now make or break contracts.

In order to have something to sell in the winter you must be able to take during the summer.

(5) *Distributors*. They picked up a little ragged, dirty, disgruntled business, nursed it along, gave it every minute attention, and now it has grown up to a "Gargantua" that can neither be held nor turned loose. Distributors have gone out to the byways and sold LPG. Col-

lectively, they have invested millions.

They also are bit by this ratio bug—"1½ to 1." I believe, they have named him. But one day he suddenly appears (and maybe that day is the coldest day in January; yes, the coldest since '89). They only can have 1½ gallons for each gallon bought last July. Now it was not very cold last July so it seems they didn't buy much then. So 1½ times that amount is gotten when they need it. Well that 1 and 1½ bug has been riding these distributors ever since they started trying to put in larger customer tanks and filling them in the summer, and that runs into money fast—plus the fact that people just hate to buy gas in the summer time, in fact they just don't.

Well now something *can* be done about this ratio bug.

How?

Put in some storage and take that 1½ times as much in winter as you buy in summer and then it won't be necessary to give away gas in the summer just to keep up the volume.

Consumers Are Like The Bankers

(6) *Consumers*. Now I don't know how Mr. Consumer got into this picture but it seems he winds up in about every deal. They're like the bankers; all they furnish is the cash that makes all of the rest possible. Well, this consumer is the fellow that you had a lot of trouble getting to throw away that cold stove or kerosene burner and put in this new, modern "best there is yet" fuel. But you finally

convinced him and now he wants the fuel.

I have done a little consuming myself and always wanted the fellow that supplied me to have the fuel on Sunday morning as well as Saturday night because that is when a fellow really needs it. And these other consumers want you to have fuel when they need it. Now these consumers are beginning to ask, "Do you have adequate supply?" And since they only furnish the money that makes the whole industry tick, it looks like the only thing that will satisfy them is the assurance that you have plenty of the gas buried.

Excess Production is Wasted

When underground storage was announced, as much information as was available was given out on the methods of installation and operation. This was done to create interest in the method because at that time, as now, there was excess production that was being wasted and dumped on a weak market, which caused turmoil in the industry in the summer and with shortages that developed in the winter which caused repercussions that were heard as high up as Washington.

It was the intent then, as it is now, to present the method to the industry for their acceptance and use. But, for some reason, this acceptance was a little misconstrued. Either the management did not consider the whole aspect of the problems that would arise or the engineers misinformed their management as to these problems—and I am inclined to think the manage-

ment was the offender, in this instance. At any rate, someone said, "Heck, it's easy, let's do it. It's as simple as digging an oil well and we do that every day." Yes, I can cite you instances where the best major companies have dug one, two or three oil wells and didn't get oil, and another driller produced oil in the same locality from the same depths. So it is with producing under ground storage, it has had its problems, and these problems are being solved. Although some of the solutions have been somewhat expensive.

Brazilian Refinery to Expand Production of Butane-Propane

Increased production of LPG is promised in Brazil with the announcement of expansion of Brazil's first modern refinery at Mataripe in the State of Bahia by M. W. Kellogg Co., refinery and chemical plant engineering-contractors of New York City.

The expansion will double the capacity of the present 2500-bbl.-per-day combination thermal refinery completed in 1950. It will include catalytic polymerization which will raise the overall octane rating of the finished gasoline, as well as facilities for production of LPG.

Maryland Dealer Named To Government Post

Robert R. Hare, Parlett Gas Co., Waldorf, Md., has been appointed by OPS to head its L. P. gas activities.

Mr. Hare has had long experience in the LPG industry, as a member of Phillips Petroleum Co. and as a dealer in Windsor, Conn., before his affiliation with Parlett.

Manpower "Conversion"

Takes Slack Out of Summer Sales

WONDERFULLY busy in the winter and terribly idle in the summer—that's the plight of most L. P. gas dealers. Some operators consider this their greatest problem. When the weather is cold, business is so good that it can hardly be handled well, yet when summer arrives things slow to a snail's pace.

Although many solutions have been tried, few actually relieve the situation. Some dealers discharge personnel who cannot be kept busy during summer months. While this reduces payroll costs it does nothing to make the operation less seasonal; it doesn't solve the problem. Further, it gives the workers a feeling of insecurity which results in inefficiency and disloyalty.



By **BILL NEWMAN**

Fl. Worth Retail Institute
Fl. Worth, Texas

And when cooler weather returns the men who were discharged are employed elsewhere, meaning that the dealer must break in new, if not inexperienced, employees.

Other dealers have added a line of electrical air conditioners to be pushed with the advent of summer. It seems logical, doesn't it? As the demand for gas diminishes the need for air conditioning increases. Fans, home freezers, television sets, and other electrical appliances have been tried.

There are two disadvantages to adding any type of electrical appliance, however. First, it's difficult to be loyal to two kinds of fuel at the same time. You'll find yourself telling a prospect how economical L. P. gas is and, in the same breath, how little it costs to operate an electrical appliance. But still worse, you have no long range benefit from the sale of electrical appliances. The gas load, which should be the backbone of any LPG operation, is not increased.

An Answer to the Problem

Probably the best solution to this seasonal problem is making truck drivers, servicemen, and installation men into temporary salesmen. If some of these men can sell successfully new installations during the warm months, everyone



is kept busy and the slack season is avoided. This results in your turning a bad situation into a very good one, as your fuel load becomes even greater. It's in keeping with one of Dale Carnegie's ideas: "When you have a lemon, make a lemonade!"

Not all outside men should be converted into summer salesmen, since the men who are changed to selling should soon start bringing in new business for others to install. The conversion of about two-thirds of your outside men should be sufficient, with those unwilling to sell or least likely to succeed at it continuing their regular duties.

If you need help in deciding which persons are least likely to succeed in selling, your men can be given tests at the state employment commission office in your town or in a nearby city. The test takes less than an hour and will

predict success or failure in selling to a surprisingly accurate degree. However, the author of any test will tell you that tests are not infallible and should be used in conjunction with other selective techniques.

A man does better when working at only one thing at a time; consequently, those switched to selling should not be returned to their regular jobs every few days. To sell for three days and help make an installation on the fourth day would reduce job interest and lower efficiency, although irregular customer demands might preclude your following this principle to the letter.

Let It Be Their Solution

Your men will be more willing to sell if they believe they have a part in deciding they should sell. Pushing something down employees'

throats, even when done for their own good, doesn't always result in their swallowing it.

Why not present the problem at an employe meeting? You could easily steer the group to the conclusion that it would be better for some to sell than for all to risk summer lay-offs. Since those who formulate a plan feel more responsible for its execution, let the solution be their suggestion.

Before the meeting is over, and again after the conversion has begun, all personnel concerned should be told of the advantages to them of their selling during the summer:

1. Selling is better than the risk of summer lay-offs, being careful not to threaten with lay-offs.

2. Selling is an interesting and dignified type of work; those who sell can be proud of it.

3. A man who can do more than one job is more valuable to your company or any other company. He is usually the last person who is out of a job.

4. A very profitable career may be in store for those who give it a try, as successful salesmen are among the best paid of all workers. Some of the men might double their incomes. Those who do well and wish to continue selling after summer is over should be allowed to do so as they are worth more to you as good salesmen.

A man must feel capable of doing a job before he will work hard to succeed at it. Why should a plumber feel capable of selling? Most salesmen feel incapable of doing plumbing. The answer to this question is sales training—a good

course in selling, not all of which should be presented in one day or even one week. They must be shown clearly how to sell and convinced they can, else they will feel incapable and never make a genuine effort.

Provide On-The-Job Training

In addition, on-the-job training must be provided. Someone should work all day (and evening) once or twice per week with each individual until he becomes a real salesman. Listen to his sales presentation, giving constructive and tactful criticism after each call. Do not hesitate to help all new salesmen close their deals, for they will be weakest on the close. Correct mistakes, reteach, and encourage each man.

Joe B. Burns, whose Liberty County Gas Co. is an outstanding Texas firm, declares, "Training is the answer to this problem. Hoping your men will sell isn't enough; it's necessary to train them."

After the men get started, a sales contest or two should stimulate interest and enthusiasm. It should be a fair contest, and it would hardly be fair for the regular salesmen to participate. There is no place for rivalry in a contest—only friendly competition. Above all, the contest losers should not be made to feel inferior.

Daily or weekly meetings will do much to inspire these men. Ten to 30 minutes each Monday morning can result in an enthusiastic plunge into the week's work. Many firms have a successful salesman from another type of business give a brief inspirational talk at an



Give him a "shot in the arm," not a "kick in the pants."

occasional meeting. All salesmen need such "lifts" to avoid let downs; these meetings should serve that purpose.

Credit must be given where due. Nothing makes anyone work harder than a timely pat on the back. When a man brings in an order, that is the time to praise his work. Pay day is another good time to commend his work. We should also recognize and praise the effort of those who sell little but try hard.

L. W. Gardner, Jr., operating the Farmers Butane Gas Co. at Hamilton, Texas, reports that conversion of outside men is worth the trouble. He finds that, "Fuel truck drivers can sell tanks and appliances. Further, upon returning to their fuel trucks in the fall they can sell more gas because of the training

and experience they received during the summer.

There can be one pitfall. Any regular salesman may feel that "the hounds are being turned loose on him." If a regular salesman has a protected territory, let it be well understood that others won't interfere. Make use of a regular salesman by letting him tell the others how swell this selling business really is; this will inflate his ego as well as help the temporary salesmen.

During this concentrated work with the temporaries, a regular salesman must not be neglected. He should get due attention, help, and praise. By tactfully handling the regular salesman you can cause him to catch the enthusiasm of the novices and, as a result, increase his own sales.

It is difficult to suggest a compensation plan for summer salesmen. Certainly they should be paid on much the same basis as regular salesmen. Many of the temporaries will be hesitant about accepting a straight commission, afraid they will have insufficient income for the support of their families.

A small weekly or monthly guarantee, to be paid when commissions are below the guarantee figure, might give them sufficient feeling of security and serve as evidence of your good faith. I would hesitate to offer the temporaries a guarantee unless the regulars were given the same benefit, however.

Since it costs about \$200 to replace the average employe, a small guarantee might be good economy.

A Man's World?

Fair Sex Owns Arkansas Firm



MRS. EARL TRIPP JR.

By ZOE JOHNSON



MRS. J. R. DENISON

ANYONE under the impression that the butane-propane business is a man's world hasn't heard about the Tripp Gas Co., Inc., of Batesville, Arkansas. In the driver's seat of this profitable family operation is a woman who, with her daughter, assumed the management of the firm following the death of her husband.

Though a youngster in the industry, the Tripp Gas Co., Inc., was growing lustily under keen competition when in September, 1950, a

highway accident took the life of J. Reed Denison who founded the company in 1948 with his wife and Howard Tripp.

Mr. Denison's business interest was purchased by his wife and daughter, Mrs. Earl Tripp, Jr., and reorganized. The two women, however, preferred to let the men of the family actively manage the business and so took lesser posts in the reorganization.

As a result Earl Tripp, Jr., was made president and Howard Tripp,



Storage tanks of Tripp Gas Co., Inc. at Batesville, Ark. with transport truck and supplier tank car at right. Firm has storage capacity for 30,000 gals. of propane and 7000 gals. of butane.



Tripp's personnel and transportation fleet are shown lined up in front of company offices at Batesville, Ark. Fleet includes two tank trucks and three installation and pick-up vehicles shown here with two passenger cars. Personnel, left to right, include Robert E. Smith, Mrs. J. Reed Denison, Mrs. Earl Tripp Jr., Earl Tripp Jr., Howard Tripp, A. B. Stephens, Bob Bracy, Morris Crafton and Robert Wyatt.

vice president, with Mrs. Denison taking on the duties of treasurer and her daughter, Mrs. Tripp, Jr., those of secretary.

J. Reed Denison left his company with a large share of goodwill built up during his years in the manganese mining business that has helped the family considerably in overcoming the first few difficult years of getting established and carrying on the business.



EARL TRIPP JR.



HOWARD TRIPP

The Tripp Gas Co. started business in 1948 with only \$11,000 capital and today operates two gas trucks, three installation and pick-up trucks which supply customers in a 50-mile radius. Their present capital is \$27,800.

In 1948 they installed only 45 systems but now have made about 500 installations. The firm has 30,000 gal. storage for propane and 7,000 gal. capacity for butane.

Emphasis on the sale of appliances has found many new and satisfied customers for the firm and indicates, perhaps, the influence of the "feminine touch" in the business. Ranges operated with bottled gas lead the appliance sales.

Mrs. Denison reports that the greatest pleasure in her work is in seeing a gas range installed for a customer who has never known the convenience of cooking with gas.

She recalls a thrill that came to her a few years ago when she had her first introduction to butane cooking—a three burner hot plate installed in her kitchen with a 5-gal. bottle — that she used for canning.

Placing a new range in a home "on trial" is the Tripp's best sales approach. They find that a stove placed on a free trial basis is seldom taken back. Sale of a range frequently leads to the sale of a complete system and a permanent, happy customer.

Propane is Tripp's principal gas because they feel it is less expen-

sive and easier to make installations above ground. Butane is carried in small gallonage to supply customers who have buried butane tanks installed by other dealers previously.

All their installations are made with iron pipe, unless the customer demands copper tubing, due to lower labor costs.

Competition in the area keeps Mrs. Denison and the Tripp families on their toes but with a friendly feeling for their competitors, knowing that in the northeast Arkansas territory there is business to be had by all.

郊外の皆様に市内同様

ギヤス使用の便宜を提供致します

それは

サバーバンギヤスサービス会社のミーターギヤスと稱する

ミーター附

ビューテンフロベーンギヤスを使用する事で

▲そして毎月使用したガスの代を支拂ふ方法とを勧めいたします。

▲タンクや設備品を購入する必要なく、又一度に多額のガス代を支拂ふ事もありません。

▲責任ある会社のドライバーが、いつも貴家の使用したガスの量をタンクに入れておきますから、ガスがなくなる心配はありません。

▲現在、米国内でビューテンギヤスを使用している家庭が、六百萬以上あります。

▲現在、米国内でビューテンギヤスを使用している家庭が、六百萬以上あります。

▲ミーター附ですから、漏出又は零れ等の損失もなく、それにミーターは右左に動かすこともありません。

▲何時でもいくらの使用したかわかります。

▲貴社は責任を以て、常に設備品を検査し、トラブルのない様に注意いたします。

▲既にビューテンギヤス御使用の方々は、極く簡単にミーターを附ける事が出来ます。

▲新たに家を建てる場合、ヒーター、ストーフ、ライナー、ヒーター、冷蔵庫等に使用する燃料に關する事は、是非貴社へ御相談下さい。御便宜を許します。

▲貴社は、ヒーター、ストーフ、ライナー、ヒーター、冷蔵庫、其他諸器具も販賣して居ります。

▲月賦拂の方法もありますから、何卒御来店の上、御覧下さい。御覧下さい。

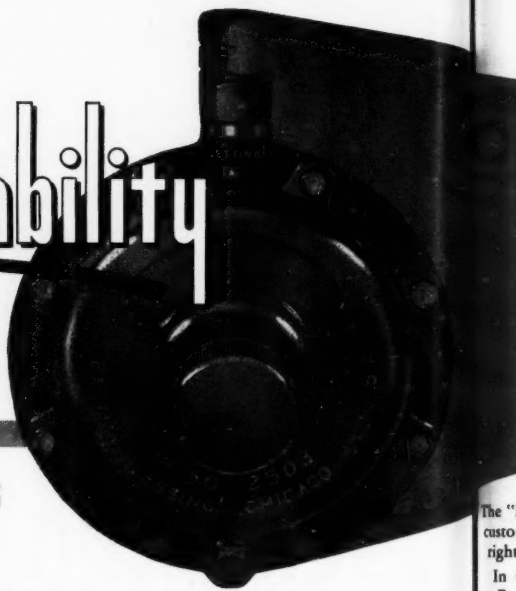
▲貴社社員は、毎週會議を開き「如何にして顧客に満足していただける様なサービスが出来るか」を討議して、貴社の方針を決定し、常にお客様本意を以て、御用命に應じます。何卒貴客のサバーバンギヤスサービス会社の便利をミーターギヤスサービスと御利用くださる様を勧めいたします。

各 位

サバーバンギヤスサービス会社

In certain agricultural areas in California there are many Japanese users and prospects, so a folder in their language has been printed by Suburban Gas Service, of Upland, which describes the many uses of the fuel and the company's metering system. It has resulted profitably for the company because the Japanese appreciate this evidence of consideration for many who do not read English fluently.

dependability



There's a RegO Low Pressure Regulator for Every Type and Size of LP-Gas System



No. 2503 Series Regulators

Designed for use on portable cylinder systems and bulk delivery systems where load demands are high.



No. 2403 Series Regulators

Designed for portable cylinder systems and bulk delivery systems with medium load demands.



No. 2303 Series Regulators

Especially well adapted for Cash and Carry systems and trailer installations.

Here are Important Features of RegO Regulators

NOZZLE ORIFICE—Precision machined with polished seating surface to assure positive shut-off and low lock-up.

BODY and BONNET—Special lightweight alloy—electrolytic protective coat plus lacquer finish provides added resistance to corrosion.

DIAPHRAGM—Special composition assures added sensitivity, long life and accurate control over an extreme range of atmospheric temperatures.

REGULATING SPRING—Large spring diameter and maximum length assure sensitivity and minimize fluctuations in outlet pressure.

RELIEF VALVE—Integral, spring-loaded, diaphragm-actuated.

SEAT DISC—Special resilient, long life composition with precision ground seating surface to assure uniform nozzle contact. Extra depth provides take-up for wear.

VALVE SEAT ACTION—Straight-line guide produces square contact between seat disc and nozzle orifice—no uneven wear due to "rocker" action.

REGULATING LEVER—Provides optimum leverage ratio between diaphragm movement and seat disc.

VENT OPENING—Protected by bug screen. Threaded for connecting discharge pipe if required.

Available with propane, butane or second stage settings.

"Beyond
a Shadow
of a
Doubt"

with **REGO** REGULATORS

The "heart" of every LP-Gas system is the low pressure regulator. It must give your customers the dependability that you want them to have—and that they have every right to expect.

In their role of the most important piece of equipment on any LP-Gas system, RegO regulators are designed to give outstanding dependability at all times, even under extreme operating conditions.

RegO low pressure regulators are specified as standard equipment by major tank manufacturers and LP-Gas distributors the country over. They know that RegO regulators keep costly repair and replacement charges at a minimum and too, they help to maintain customer satisfaction at the high level that brings about increased gas loads.

More RegO low pressure LP-Gas regulators are in operation than all other makes combined. This is proof positive that they give the utmost in dependability—*beyond a shadow of a doubt!*

RegO is the registered trade mark of the Bastian-Blessing Co.



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Stocked by These Distributors
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**PIONEER AND LEADER IN THE DESIGN AND
MANUFACTURE OF PRECISION EQUIPMENT
FOR USING AND CONTROLLING LP-GASES**

Cash or Credit Sales?

There are advantages of both—selling for cash with facilities for credit extension advisable—But collections start at time of sale, says author.

THE subject of credits and collections is an enormous one. Volumes have been written on the subject. It is a course in most colleges and universities—especially those that have a school of business administration.

The first important decision you—as a business man—have to make is to answer the question: "Shall I sell for cash or credit?" You have no other choice and there is no in-between.

There are advantages of dealing with your customers entirely for cash. It is easier to keep records, less capital is required. Some goods and services lend themselves to cash sales like the barber shop and 5 and 10 cent stores.

Some types of businesses are operated both on a cash and credit basis. Grocery chains are operated on a cash basis while most home-owned markets extend credit.

In considering whether you are going to extend credit or not you must consider these factors:

As no sale is ever completed until it is marked "Paid in Full" the subject of credits and collections is an important one for every dealer. Here is the first of two articles on this timely subject by a prominent credit authority, Ralph B. Kearns, president, Associated Credit Bureaus of America, Inc.

Material for this article originally was presented by Mr. Kearns before the L.P. gas management short course at University of Kansas last April. Part II, covering collections, will be presented in the July issue.

- (1) Is my capital adequate?
- (2) Can I sell all the merchandise I can get for cash?
- (3) Do my competitors sell for cash only or do they extend credit?
- (4) Does the merchandise I sell lend itself to selling for cash, credit, or both?
- (5) Do I have the proper facilities and personnel for extending credit and collecting for it?

Let us now consider some of the advantages of offering credit privileges to your qualified customers.

By RALPH B. KEARNS

President, Associated Credit Bureaus of America, Inc.

1. Credit sales are easier to make, especially when they involve larger amounts of money as in the case of a large installation.

2. An increase in the volume of business handled by the firm makes possible larger volume purchases.

3. The credit customer is your customer. He enjoys your faith in his ability and willingness to pay. Therefore, he feels free to come back to you again and again for more goods and services. Furthermore, he is likely to recommend your firm to others.

4. It is an established fact that credit sales increase total sales.

It is interesting that there are two notable disadvantages to a cash sales policy. If such a policy is strict, you are "swimming upstream" to make sales, because more and more retailers are inviting consumers to take advantage of the convenience of charge accounts. On the other hand, if you do not require full payment in cash, but have actually a slipshod half cash and half credit business, then you are headed for the worst kind of trouble without a sound credit policy.

From what I have learned about your business, I would state that to operate a good, progressive LPG business, you will sell for cash and you will have the facilities to sell for credit. Your cash sales should run between 65-75% of total sales.

Cash sales should be encouraged. I base this statement on information that about 90% of your sales are to farmers—nowadays most farmers have the cash to pay—and that your merchandise serves the

purchaser for a period of three or four months, which means he is only in the market to buy three or four times a year.

In making cash sales, there are several factors for you or your route man to consider:

1. You might pay your route man a premium—say $\frac{1}{2}\%$ to encourage cash sales.

2. Saves you time and truck expense.

3. Saves you record keeping.

4. Saves you collection expense.

5. No call-back for collection.

6. No credit loss.

7. No possibility for deduction—if credit losses are charged back to route man.

8. Cash customer is always a prospect for further sales.

9. A large number of your customers desire to pay cash.

Upon completion of a delivery and in the presence of the customer, follow these steps in making the cash sale:

(1) Complete the figuration portion of the ticket. (2) Inform the customer of the amount of the sale. (3) Have a pad of blank checks ready for his use if requested—then (4) Complete the top portion of ticket.

By using this procedure, during the time you are completing the ticket, you are giving the customer "the opportunity to pay cash." During this time, he will be either filling out a check, securing the cash, or deciding on a date he can make payment. If credit is requested you are in a position to make definite arrangements.



You must have proper facilities and personnel for collections.

The following is the type of approach used by many successful route men when making "Cash Sales":

Route Man: (after completing figuration portion of ticket.) "That will be \$150.00, Fred."

Customer: "What's that amount?"

Route Man: "\$150.00" (Route Man is filling in top portion of ticket during this time.)

Customer: "Do I have to pay cash? What's the matter, isn't my credit good with you any more? The Competitive L. P. Co. has been after me for a long time and will give me all the credit I want as long as I want."

Route Man: "Certainly your credit is good, Fred, and I know that other L. P. men in this area will give you credit, and so will I if it is more convenient for you."

Customer: "Well, right now I would just as soon pay cash, because I prefer to keep my bills paid up; however, there are times when I need credit for a short time and I want to be sure I can get it when I need it."

Route Man: "Well, Fred, our 'regular credit terms' call for payment on the 15th of the month following the month of delivery, and I can give you this type of credit anytime you really need it."

You can be assured of increased cash sales if you will always "give your customers the opportunity to pay cash."

Now—let's talk about credit sales. Credit sales are profitable—provided your business is set up to handle them properly.

The key to profitable Credit Sales is "Know Your Customer."

It is the practice of many firms to ask the customer to fill out an "application for credit" form.

Other organizations try to obtain the necessary information through conversation with the customer, making mental notes of pertinent information and filling out the application when the customer has left.

In regard to farmers, it is important to ask yourself and obtain the answers to these questions:

1. Is he a careful manager?
2. Does he have a good reputation?
3. What does your banker think of him?
4. Are his crops or real estate heavily mortgaged?
5. What are conditions in his locality?

To "Know Your Customer" you must develop your ability to observe—to analyze—to judge.

The following sources can supply you with information that will help you "know your customer:"

- Your banker or the banker in the area where your customer lives can help you. Develop his confidence.

- Merchants — Develop friendship and confidence of local merchants—they can give you information on your prospects' reputation for paying accounts.

- County recorder — Get acquainted with your county recorder—this source tells who will control crop revenue.

- County extension agent—He can keep you well informed on local crop conditions and government programs.

- Credit bureaus—where available—are the best source of information regarding the identity, character and pay record of your customer.

The ideal situation would be to "know your customer" while he is a prospective customer. The advantages of this are that you know in advance of the sale on what basis you will make the sale.

"Knowing your customers" in advance, you are able to make the proper "credit approach." The credit approach is the second "key" to successful credit administration.

The following is an example of what we mean by "credit approach."



By knowing your customers in advance you can make proper credit approach.

George E. Wells, age 45, married, two children, is a well established farmer located near Mulvane, Kans. He owns his farm, consisting of 220 acres of good bottom land. His farm buildings are in good repair. He owns a 1950 Ford car, 1949 1½ ton Ford truck, Model 70 Oliver tractor and other necessary farm equipment. He has borrowed \$2000 from the Mulvane State bank to purchase 10 Black Angus calves of good stock. Banker Henry Smith estimates the net worth of Mr. Wells at \$45,000 and rates him as "prompt pay."

Route man Jones, having this information recorded in his books, makes a delivery to Mr. Wells and begins filling out the sales ticket.

Route man Jones: (After completing figuration portion of ticket) "That'll be \$150.00, Henry."

Customer Wells: "How much, George?"

Route man Jones: "\$150.00"

(Route man in process of filling in top portion of sales ticket.)

Customer Wells: "Well, George, I'm a little short of cash at this time. Just borrowed \$2,000.00 to buy those 10 calves out there in the feed lot. What kind of credit arrangements can we make? You know I usually pay cash."

Route man Jones: "Sure, Henry, I know we can work out something. *Our regular credit terms call for payment on the 15th of the month following the month of delivery.* In other words, payment for this merchandise I've just delivered to you won't be due until the 15th of next month. Will that be enough time, Henry?"

Customer Wells: "Well, George, ordinarily it would, but I would like to have an additional three weeks as I plan to sell an old sow just as soon as her present litter of pigs is old enough to ween."

Route man Jones: "Now let's see—this is October 25th. Three weeks beyond our regular terms, would make it December 3rd. Is that right?" (Jones places this date on sales ticket.)

Customer Wells: "That'll be swell, George, and I'll have the money for you."

Five Points Applied to Example

Now—let us apply five principles of credit extension to this illustration.

First. Who is he? He is George E. Wells, age 45, married and has two children. It is important to know this and to record it in your record.

Second. Where is he? He is a

well established farmer located near Mulvane, Kansas.

Third. Can he pay promptly? He should be able to pay promptly. He owns a 220 acre farm of good bottom land. His buildings are in good repair and he owns a car, truck and other farm equipment. His net worth is \$45,000.00 according to the banker.

Fourth—Will he pay promptly? Henry Smith of the Mulvane State bank says he is prompt pay.

Fifth—Can he be made to pay promptly? I would say yes. He has sufficient quick assets that could be converted into a sum considerably larger than \$150.00.

Record Terms on Sales Ticket

The next important thing to gain from this example is this: A definite understanding has been reached regarding terms and payment date. These should always be recorded on the sales ticket. It is also important that the customer sign the sales ticket.

An account properly opened is over half collected. Remember, collections start at the time of the sale. No sale is ever complete until it is paid.

Algas Board Chairman J. A. McNaughton Dies

John A. McNaughton, 83, chairman of the board of the American Liquid Gas Corp., Los Angeles, died in April.

Mr. McNaughton founded the Los Angeles Union Stock Yards and retired from them in 1942.

He started the Great Western Livestock Show in 1925 with the aid of his associates and worked closely with the 4-H and FFA youngsters.

HAVE YOU AN OPERATING PROBLEM?

Here is a typical letter from a dealer asking for technical information, as you may do, if you desire.

Other inquiries and answers appear every month in the "Letters" department of Butane-Propane News. (See page 43 of this issue).

INQUIRY

SOUTH CAROLINA

Please compare for me the cost of propane at 19¢ per gal. against electricity at 4½¢ per KW for first 50, next 100 KW at 3¢, next 2500 KW at 2½¢, all over this 1½¢ per KW. This per month.

C.L.A.

ANSWER

A kilowatt hour is equivalent to 3412 Btu and 1 gal. of propane contains about 91,300 Btu; therefore, it requires $91,300 \div 3412 = 26.6$ kilowatts to equal the heat in 1 gal. of propane.

Based on the above and the prices given in your letter, the accompanying table shows the relative cost on an equal heat content basis, and also on the basis that electricity delivers 100% of the heat (which it doesn't) and pro-

pane appliances deliver 70%, which is low in some applications.

The current series of articles in BUTANE-PROPANE News by C. C. Turner entitled "Practical Management of an L. P. Gas Business" is helpful in comparing the costs of various fuels. The installments in the October, November, and December, 1951 issues dealt specifically with comparative prices of electricity and liquefied petroleum gas.—Ed.

Number of Kilowatts	Price Per Kilowatt	Total	No. Gals. Propane To Equal	Cost Per Gal.	Total Cost at 100%	No. Gals. Propane to = 70% Effie.	Total Cost Propane at 70% Effie.
50	4½¢	2.25	1.88	19¢	.36	2.69	\$.51
100	3½¢	3.50	3.76	19¢	.72	5.38	1.02
350	3¢	10.50	13.15	19¢	2.50	18.61	3.54
2500	2½¢	62.50	94.10	19¢	17.85	134.43	25.55

At 1½¢ the break-even price for propane = .399 or at 70% efficiency = .279 per gal.

Optimism, Sales and Service Keynote LPGA Convention

1952 LPGA OFFICERS

President—Foster N. Mabee, Colorado Natural Gas & Fuel Co., Denver.

1st Vice President—C. M. Ambrose, Jr., Liquefied Gas Corp., Seattle.

2nd Vice President—Frank T. Carpenter, United Petroleum Gas Co., Minneapolis.

Treasurer—Walter H. Miller, Dri-Gas Corp., Chicago.

Executive Vice President—Howard D. White, Chicago (reappointed).

Secretary and Vice President—Arthur C. Kreutzer, Chicago (reappointed).

LPGA DISTRICT DIRECTORS

1—*C. M. Ambrose, Jr., Liquefied Gas Corp., Seattle.

2—Ernest Fannin, Fannin's Gas & Equipment Co., Phoenix.

3—*H. H. Torbit, Union Gas & Equipment Corp. Pueblo, Colo.

4—F. T. Carpenter, United Petroleum Gas Co., Minneapolis.

5—*Si G. Darling, Darlingas Service, Inc., Pratt, Kan.

6—E. L. Mills, The Bastian-Blessing Co., Chicago.

7—*Lou Abramson, Jr., The Petrolane Gas Co., New Orleans.

8—Herman Paris, Georgia Automatic Gas Co., Atlanta.

9—*W. A. Naumer, Pyrofax Gas Co., New York.

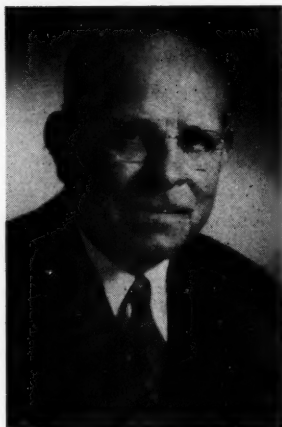
10—J. L. Fietze, Fuelite Natural Gas Corp., Lexington, Mass.

11—*E. W. Sanderson, The Petrolane Corp. Ltd., Thornhill, Ont.

12—R. W. Johansen, Sturdie Propane, Lethbridge, Alberta.

13—*Vicente Garza Osuna, Garza Gas, S. A., Mexico City.

*Newly Elected.



F. N. MABEE

SHATTERING all previous records, in attendance, interest and number of exhibits, the 1952 convention and trade show of the Liquefied Petroleum Gas Assn. attracted 2,500 persons to Chicago's Palmer House May 12-14, a 14% increase over last year. Foster N. Mabee, president of Colorado Natural Gas & Fuel Co., Denver, was chosen president of LPGA.

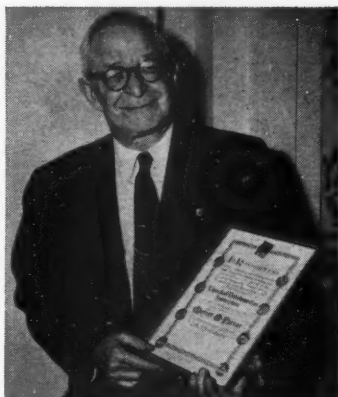
Sparked by an opening address on the state of the nation by Sen. Richard M. Nixon of California, the speaking program included talks by two prominent Washington officials who gave convention-goers a quick grasp of the nation's supply situation in respect to both L. P. gas and L. P. gas appliances.

Distinguished Service Award to M. G. Farrar

Mercer G. Farrar, chief engineer of the Pyrofax Gas Co., New York City, a division of Union Carbide and Carbon Corp., was honored with the Distinguished Service Award of the Liquefied Petroleum Gas Assn. at the convention in Chicago. Walter F. Verkamp, president, The Verkamp Corp., Cincinnati, O., and a past president of LPGA, made the presentation at the final luncheon of the three-day session.

The award is given only once each year for outstanding contributions to the association and the L. P. gas industry. It carries with it an honorary life membership in LPGA.

Mr. Farrar, 65, received the coveted award because of his "long and meritorious service to the industry in the development of technical standards and promotion of safety."



Mercer G. Farrar, chief engineer, Pyrofax Gas Co., New York City, beams with justifiable pride as he displays Distinguished Service award of Liquefied Petroleum Gas Assn. He received award at organization's annual convention in Chicago.

Richard P. Walsh, Petroleum Administration for Defense, said the present productive capacity of L. P. gas will meet the 1952 anticipated demand of some 5 billion gal.

"Historically the demand for L. P. gas has been increasing at the rate of from 20 to 25% each year," said Mr. Walsh. "There is evidence, though, that demand for all petroleum products is leveling off, and this trend may well affect the demand for L. P. gas. PAD predicts a probable demand for 5.8 billion gallons in 1953.

"If that demand is to be met, there will, of course, have to be a sufficient quantity of raw material—wet gas—from which LPG can be produced.

In spite of government cutbacks on raw materials, there is now an abun-

dant supply of finished durable goods, Harry J. Holbrook, director, Consumer Durable Goods Div., National Production Authority, told the convention. It has taken about six years for sales of household appliances to get in line with consumer income and population growth—it took that long to make up the wartime shortages and the backlog now appears to be filled," he said.

"Being a new industry you have many new markets available to you and your sales potential is great. Gas appliance manufacturers have great plans for your markets. During World War II we heard very little about L. P. gas in Washington. Now it is a major topic of conversation of all gas

NBPA MERGES WITH LPGA

Charles Grau, president of the National Butane-Propane Association, has announced that the Liquefied Petroleum Gas Assn. has accepted the proposal of NBPA for its consolidation with LPGA. The consolidation is effective immediately and all NBPA members will become members of LPGA, if they so desire.



CHARLES GRAU

Grau, who is president of the Oneida Gas Co., Rhinelander, Wisc., said the action was taken in the interest of implementing a stronger and larger trade association to better serve the liquefied petroleum gas industry, one of the fastest-growing businesses in the nation.

Foster N. Mabee, president, Colorado Natural Gas & Fuel Co., Denver, Colo., is president of LPGA.

appliance and equipment manufacturers. Now is the time to plan for the future."

Tracing the rapid recent growth of the industry, W. S. Lander, LPGA retiring president, said that in 1951, just 39 years after the first domestic installation was made, the number of installations skyrocketed to a record figure in excess of 8,000,000. "The amount of fuel marketed last year,"

he added, "was over 4 billion gal.—or better said—if the cars containing this gas were put in a single train, it would reach from New York to San Francisco and there would be enough cars left to make another train from Chicago to Detroit."

The Tank Fabricators committee activated a three-point program to provide an expanded market; to establish a sound public relations program; and to help the industry function efficiently, honestly, and ethically, according to W. H. Brooks, executive manager of the recently formed committee.

Mr. Brooks warned industry men not to sell themselves on the idea that "this business has already reached its peak and will now level off to an unexciting and routine program of selling installations on a now-and-then basis."

Addressing the marketers section, I. W. Patterson, general sales manager, General Gas Corp., Baton Rouge, La., warned the industry to tighten

1952 SECTION CHAIRMEN

Marketers—I. W. Patterson, General Gas Corp., Baton Rouge, La.

Appliance Manufacturers—George H. McFadden, Ohio Foundry & Manufacturing Co., Steubenville, Ohio.

Equipment Manufacturers—Robert Lisk, Fisher Governor Co., Marshalltown, Iowa.

Producers—George W. Bach, Skelly Oil Co., Kansas City, Mo.

Utilities—Roger De Lacy, City Gas Co., Antigo, Wis.

International—Al Alice, Delta Tank Manufacturing Co., Baton Rouge, La.

Tank Fabricators—Fred Henninger, Charlotte Tank Co., Charlotte, N. C.

up sales, service and promotion programs if it would maintain the gains now made. He recommended that the industry plan to avoid the growth of government regulation, stating that it would be better if dealers themselves used license fees paid to government bodies to put into effect, at less cost, their own safety installations and practices.

Arthur "Red" Motley, president of Parade Publications Inc., urged the spending of money for market research for improved service techniques and development of new sources for sales power and training of that sales power.

S. J. McLagen, general sales manager, Suburban Propane Gas Corp., Whippany, N. J., told the marketers section meeting that regular canvassing of present customers was the best sales weapon. He discussed at length his firm's success in water heating promotion which resulted in 8,000 installations. "Give water heating a fling," he said. "Discuss it with every customer and prospect; you will surprise yourself with the number who will display interest and who will display interest and who will buy."

There are still 27 million homes enjoying automatic heat but who still use garbage and rubbish cans instead of automatic, gas-fired incinerators, said John G. Dierkes, Incinerator div., Bowser, Inc. He pointed out the tremendous potential afforded LPG dealers and distributors for gas-fired incinerators.

At the Monday business session, the treasurer's report showed a budget of \$212,809 for activities to be undertaken by LPGA in the 1952-53 period. Income is expected to exceed the budgeted amount.

Exhibit booths, numbering 164, filled the Palmer House and overflowed into a nearby room and a connecting corridor.

1952 LPGA STATE DIRECTORS

Alabama—Victor T. Mavity*
 Arizona—Ernest Fannin*
 Arkansas—R. J. Dodson
 California—R. E. Meeder*
 Colorado—R. E. Hustead
 Connecticut—H. S. Rowan*
 Delaware—Stanley H. Keen
 Florida—S. W. Langer*
 Georgia—Fred A. Rives*
 Idaho—L. V. Rothrock
 Illinois—E. Carl Sorby*
 Indiana—H. C. TenBrook*
 Iowa—Jas. A. Leach*
 Kansas—G. M. McClellan
 Kentucky—Frances Holliday*
 Louisiana—R. D. Phillips
 Maine—P. A. Anderson*
 Maryland—C. J. McAllister
 Massachusetts—Max Raftowitz*
 Michigan—Lou Marshall*
 Minnesota—F. T. MacCahill*
 Missouri—K. H. Dickson
 Montana—D. O. Mecklenberg
 Nevada—W. W. Dudley*
 New Hampshire—Ernest Berry*
 New Jersey—H. Emerson Thomas
 New Mexico—O. L. Garretson
 New York—Louis Seley
 North Carolina—R. S. Steele*
 North Dakota—E. M. Levi*
 Ohio—W. F. Verkamp*
 Oklahoma—G. L. Brennan
 Oregon—James C. Yeomans
 Pennsylvania—L. F. Finkler
 Rhode Island—H. H. Dauphinee*
 South Carolina—E. K. Butler, Jr.*
 South Dakota—Millard Kiel*
 Tennessee—W. G. Petty, Jr.
 Texas—Milton J. LaDue, Jr.
 Utah—J. H. Reese
 Vermont—D. K. Monier*
 Virginia—E. O. N. Williams
 Washington—Glen Fansler
 West Virginia—C. Wade Gibson
 Wisconsin—Tom Quail*
 Wyoming—Talmage Lovelady

*Newly Elected.



ASSOCIATIONS

Ohio

More than 150 delegates attended the spring meeting of the Ohio Liquefied Petroleum Gas Assn. held April 29-30 at the Fort Hayes hotel in Columbus.

Outgoing President Lyman H. Adams opened the meeting, after which M. A. Ennis, employee training director of the National Committee for L. P. Gas Promotion, related some "Facts About L. P. Gas Storage" and distributed a booklet, "L. P. Gas Storage and Ratio Manual," which has been prepared by the committee.

Detroit-Michigan Stove Co.'s vice-president, Fred Kaiser, discussed the important market in the commercial

cooking field in an address, "Food Sells Gas." At the annual business session, it was decided to exhibit at the Ohio state fair in August.

The following officers were elected: J. B. McGuff, Verkamp Corp., Dayton, president; Forest Fram, Fram Heating, Inc., Chagrin Falls, vice-president; Joe Hogan, Hogan's Gas & Appliance, St. Mary's, secretary-treasurer. H. E. Brumby, Suburban Gas & Appliance, Canton, and Robert Martin, OK Gas Distributing, Ripley, were chosen trustees.

Sessions on the second day were opened with a breakfast forum on L. P. gas heating. The panel included J. A. Cerny and Mel Eck, Bryant Heater Co.; Harry E. Thompson,

New and retiring officers of the Ohio LPGA include (standing, left to right): Harold E. Brumby, Canton, northeastern trustee; Otis Skinner, attorney for the organization; A. C. Johnson, Fremont, northwestern trustee; Lyman Adams, Wooster, retiring president; Robert Martin, Ripley, southwestern trustee; and Joseph Hogan, St. Mary's, retiring vice president. Seated (left to right): J. B. McGuff, Dayton, president; Forest Fram, Chagrin Falls, vice president; and Ruth Blake, permanent secretary.





Talking over industry problems during the Illinois L. P. Gas Assn.'s annual Spring meeting in Springfield, Ill., are, left to right, Al Woelfle, Bloomington, director; Frank L. Malan, Salem, president; and Russell Potter, Canton, director.

Ohio Foundry & Manufacturing Co.; and Harold Steffy, F. P. McMorrow Co. Proper planning of heating requirements was discussed, and several formulae for determining Btu requirements were presented.

"L. P. Gas Dealer Management" was the subject covered by Ross E. Cockrell, Ross Martin Co., and the meeting was concluded with "The L. P. Gas Operator's Interest in Safe Practices" by George Webster, Pyrofax Gas Co.

Illinois

Safety was the keynote at the Spring meeting of the Illinois LPGA held April 3-4 at St. Nicholas hotel, Springfield, Ill., with an attendance of more than 150 reported.

The entire first day was devoted to various problems of safety as applied to the LPG industry. Leading off the speaker's program was Max Fetty, Delta Tank Co., who stressed the need for dealers to take advantage of existing media of advertising.

Rudy Macen, Bastian-Blessing Co., emphasized safety in his illustrated lecture employing a large capital "S" in the word "safety" superimposed with two vertical lines to show safety's importance with profit.

Speaker Otto Dahl, Illinois State fire marshal, said it was his intention to make Illinois the safest state as regards handling L.P. gas and he urged everyone in the industry to work to make this ideal come true.

Douglas Havens, Dearborn Stove Co., urged safety in heating installations, adding that the installation of stove and heating equipment could aid in maintaining the gas load throughout the year, affecting rates and other factors and at the same time bringing safety into the dealer's year-round business.

Underground storage was discussed by Robert Bradley, Texas Natural Gas Corp., who pointed out the relationship of the natural gas industry with L.P. gas. Lt. Gov. Sherwood Dixon of Illinois addressed the evening banquet.

Floyd Selim, Phillips Petroleum Co.,

headed a panel discussion on LPG carburetion problems. A great deal of interest was shown among those attending, indicating the growing importance of this subject among dealers. Participating with Mr. Selim were Carl Hook, Valley Industries; Pancho Rief, Fred Frost and Al Latham, International Harvester Corp.

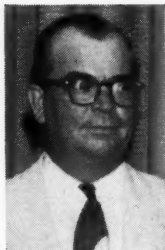
Robert Borden, director, L.P. Gas Information Service, addressed a luncheon and the final speaker was O. A. Hill Jr., Illinois Civil Defense staff.

Texas

The seventh annual convention of the Texas Butane Dealers Assn. scheduled for June 18-20 at Adolphus and Baker hotels, Dallas, looms as a major industry event with a record attendance indicated, according to Wm. J. Lawson, executive secretary.

Business sessions will be held at the Baker hotel while the Southwestern Butane Exposition will be staged in the ballroom of the Adolphus hotel. Prominent Texans have been invited to address the meeting, including W. Lee O'Daniel, former governor and senator.

A convention highlight will be the presentation of findings of the special fuel supply committee at the closing business session, June 20. Other speakers on the agenda will include E. C. McFadden, vice president, Texas



GENE BUMPUS



J. A. FARRAR

Employers Insurance Assn. who will discuss workmen's compensation insurance and safety; J. A. Farrar, Waco, a vice president of TBDA, who will talk on underground storage for the dealer; and M. L. Bussey, Center, who will discuss his study of fuel deliveries and other customer-dealer relation problems.

Other convention plans include entertainment, the annual President's reception, elections, luncheons and the annual banquet. Gene Bumpus, Plainview, heads the Texas association.

Nebraska

When the Assn. of Nebraska Liquefied Petroleum Gas Dealers held its convention at the Paxton hotel in Omaha, April 7-9, one of the highlights was a discussion of the relationship of advertising to the L. P.

Nebraska LPG dealers and wives pose for camera during convention banquet in Omaha.



gas industry by Joe H. Langhammer, Omaha advertising consultant.

Other features included a talk on the potentialities of merchandising and a description of market potential and saturation by Don Ross, merchandising manager of "Successful Farming" magazine, Des Moines, Iowa; a discussion of L. P. gas production as it is affected by summer-winter ratio by E. W. Voice, Warren Petroleum Co., Tulsa; and a review of proper bulk plant installation by Charles M. Corken, Oklahoma City.

Southeastern District

Both the Florida and South Carolina associations are planning a program of meetings featuring safety, installations and service man instruction during June. At a recent meeting in Columbia, S. C., plans were laid for a South Carolina membership drive designed to give that state the highest membership in the district, the campaign headed by Charles Smith, Seaboard Gas Co., Charleston, S. C.



CALENDAR

JUNE

- 8-10—ARKANSAS BUTANE DEALERS ASSN. Annual Convention. Little Rock.
- 9-12—SOUTHEASTERN LPG SERVICE SCHOOL. Georgia Institute of Technology. Chamblee, Ga.
- 12-14—MOUNTAIN STATES DISTRICT, LPGA. Convention and Trade Show. Cosmopolitan Hotel. Denver.
- 18—NEW YORK STATE LP GAS ASSN. Summer Meeting. Syracuse Yacht Club. Syracuse.
- 18-20—TEXAS BUTANE DEALERS ASSN. Annual Convention & Southwestern Butane Exposition. Baker & Adolphus Hotels. Dallas.
- 20-21—MICHIGAN L. P. GAS ASSN. Annual Summer Meeting. Johnson Resort. Houghton Lake.
- 20-21—MINNESOTA PETROLEUM GAS ASSN. Summer Meeting. Edgewater Beach Hotel. Detroit Lakes.

- 23-24—WYOMING L. P. GAS ASSN. Townsend Hotel, Casper.

AUGUST

- 4-5—TENNESSEE L. P. GAS ASSN. Annual Convention. Andrew Jackson hotel, Nashville, Tenn.
- 18-19—KENTUCKY L. P. GAS ASSN. Annual Convention & Trade Show. Seelbach Hotel. Louisville.

SEPTEMBER

- 7-10—EASTERN L. P. GAS SERVICE SCHOOL. University of Bridgeport. Bridgeport, Conn.
- 29-30—UTAH L. P. GAS ASSN. Fall Meeting. Salt Lake City.

OCTOBER

- 27-30—AMERICAN GAS ASSN. 34th Annual Convention. Atlantic City, N. J.
- 30—NORTHEASTERN DISTRICT, LPGA. Ambassador Hotel. Atlantic City, N. J.

PRACTICAL MANAGEMENT

OF AN LP-GAS BUSINESS

CHAPTER 15

Writing Words That Sell!

Some good ideas the LPG dealer can use in preparation of advertising copy, letters, and mailing pieces for "selling in print."

FROM the very start in your LPG business you will need use of advertising copy. Some of it, because of its reference to your business, will of necessity, have to be compiled by yourself. But until you are well founded in the business, you should depend upon others with more experience in the gas business to prepare more difficult copy for you.

There are many good books for the layman which will tell about the fundamentals of advertising. You should obtain one or two of these books, read them carefully and refer to them constantly for guidance. Better advertising copy will result.

There are many pitfalls in the vast field of advertising, some of which might make you liable for expensive damage suits. Better not take a chance until you are certain of what you are doing.

Your first move is the announcement that you are entering the gas business, and it probably will appear in your local newspaper. Your gas supplier and the appliance manufacturers which you represent will probably cooperate with you both financially and in the preparation of this initial advertisement.

The most popular type of introductory advertisement usually starts with "We take pride in an-

Don't Settle For Less!

use

Prest-O-Lite

Trade-Mark

Cylinders for LP-GAS

You are sure that your LP-Gas cylinders will give you extra years of dependable service—and save you many dollars—when you use PREST-O-LITE cold-drawn cylinders. They're built by the company which has been the largest maker and user of gas containers for almost half a century. In each step of design and fabrication the ultimate in cylinders is achieved. It's no wonder that LP-Gas cylinder buyers who have compared feature for feature have found out they're getting the greatest value with top-quality PREST-O-LITE cylinders.

Available in 20-lb., 40-lb., 60-lb. and 100-lb. sizes and styles. Other sizes can be made to your specifications. WRITE TODAY for full information.

MADE BY

Linde



- ★ Rugged, sturdy construction
- ★ Uniform sidewall thickness
- ★ Lightweight—easy to handle
- ★ Finest workmanship
- ★ Best appearance
- ★ Tested far beyond all codes
- ★ Extra years of trouble-free life
- ★ They're economical

LINDE AIR PRODUCTS COMPANY

A DIVISION OF UNION CARBIDE AND CARBON CORPORATION

30 East 42nd Street  New York 17, N. Y.

Offices in Other Principal Cities

In Canada: DOMINION OXYGEN COMPANY, LIMITED, Toronto

"Prest-O-Lite" is a trade-mark of Union Carbide and Carbon Corporation.

GREEN'S FUEL
OPENS IN BARTOW

Open House Saturday, Jan. 26th
WE OPEN IN BARTOW TO BETTER SERVE THE THOUSANDS
OF GREEN'S FUEL CONSUMERS IN POLK COUNTY!

415 East Main Street

You Are Cordially Invited
TO COME TO OUR
Open House, Saturday, January 26th
REFRESHMENTS WILL BE SERVED
You May Win This Beautiful

Caloric
ABSOLUTELY FREE!

Free Souvenirs!

Green's Fuel

An example of an initial full-page advertisement in community paper by Florida LPG dealer.

nouncing that . . ." or some similar phrase. Then follows your own and your company's build-up. The sponsor's name appears at the bottom of the advertisement in smaller type than that used for your own business name. Perhaps the names of several sponsors may appear at the bottom or around the edges of your advertisement. Sometimes it will be flanked or supported by advertisements from other business houses in the vicinity, welcoming you to their local business community.

You will not have to solicit these advertisements, for the newspaper usually has a super-salesman to convince them that you are a royal good fellow and your venture should receive their support. Sponsoring

is a good thing if there are reputable, well-known companies behind it. It adds stability to your project and it helps to get your business off to a good start with the buying public.

A picture of your place of business in the advertisement is quite appropriate if it is an attractive one. Supporting pictures of your equipment and employes help to create interest, but be sure they refer to your business and the products that you will sell. A picture of yourself at such a time is usually in bad taste unless you are a newcomer to the community. It savours too much of self-glorification; furthermore, what is there about your likeness to create interest in a gas range, refrigerator, water heater or gas service? Remember this in all of your advertising in the years to come. People laugh at the fellow who persistently gets his picture into print, particularly if he pays for it directly or by the indirect method of being a large advertiser. They feel that he is a little fellow trying hard to bolster his ego by kidding himself that he really is something!

Manufacturers Supply Mats

It will not be long before you will require good, hard-hitting selling copy. If a proposed advertisement concerns appliances, the manufacturers usually can supply you with well planned copy and illustrations in "mat" form. Occasionally such copy is too crowded, in which case it is next to useless. Frequently such advertisements go over-board in ecstasy about the beauty of an appliance. This is all very well, but they remind me of the old adage

that "beauty is only skin deep." We Americans are beauty conscious, but we are also very much interested in convenience, economy, and practicability.

Center each advertisement around one appealing feature. Don't crowd your copy. Don't make overstatements or assertions that you cannot back up. Libel suits are expensive even though you are the winner, and it has been well said that nobody wins in litigation but the lawyers. Mud-slinging always returns to you like a boomerang. You don't have to exaggerate or knock the other fellow's product to sell your own if it is worth selling.

What are the things which you have to sell in the liquefied petroleum gases and their appliances? In Chapter 13 (April issue) I mentioned some of the desirable features such as speed, economy, safety, flexibility, cleanliness and dependability. In which of these do we excel?

We certainly can trim electricity in *speed*, for the tests of the Equitable Gas Co. proved gas to be 70% faster in top burner cooking, 20% faster in broiling and 8% faster in oven roasting. Gas is more *economical* if your price structure is right and your service employees properly trained. Records of the National Fire Protection Assn. say gas is much *safer*, in fact, by a ratio of 14 to 1.

When it comes to *flexibility* we have electricity up against the wall, demonstrated by the singing teakettle test on a gas top burner compared to an electric top burner. Or

try melting chocolate over an electric top burner as against the same over a simmer burner.

As to *cleanliness*, it is suggested you read the address* given by Mr. Lee A. Brand, vice president of the Empire Stove Co., Belleville, Ill. at the annual meeting of the Missouri L.P. Gas Assn. in Jefferson City, Missouri, on October 13, 1948. Mr. Brand not only explodes the claim of cleanliness by Reddy Kilowatt but proves that gas cooking is actually cleaner.

There isn't any argument about *dependability*. You've never heard of an entire community being without liquefied petroleum gas service if that community was served by package or bulk delivery. Gas is more dependable.

In every one of these six qualities gas excels all of the convenience fuels and you can use comparative adjectives in describing them. You need not make direct reference to electricity, for oil is another one of the convenience fuels. You can refer to these competitive fuels as being "convenience fuels." *You are telling the truth when you say that gas is faster, more economical, safer, more flexible, cleaner and more dependable than any other of the convenience fuels.*

Here is where my objections start with much that is written by the professional copywriters. The majority of the material which they produce could just as well be electric advertising if the word

*Copies of this address may be obtained by writing to Mr. Brand direct or addressing The Bastian-Blessing Co., 4201 West Peterson Ave., Chicago 35, Ill.

"electric" was substituted for "gas" in it. It lacks conviction, it avoids taking a stand upon anything, it ignores the superior qualities and the advantages of gas. It encourages the "defensive attitude" in the gas industry of which Mr. Brand complains.

I have made these observations because I wish to warn you of futile advertising and to recommend a type which I have found to pay off in sales increases. Make your advertising *positive*, such as these examples:

"Gas is faster because"

"Gas is more economical because"

"Gas is more flexible because"

"No other cooking fuel can approach the results obtained with gas because" or,

"See the demonstration of precise heat control in cooking at the Blank Gas Company's showroom."

Don't be afraid to state facts that can be proved. You are in a slugging contest with Reddy Kilo-watt and he is hitting below the belt. Hit him higher, harder, cleaner and more often for a knock-out. Why pad your fists with feather pillows?

Twelve suggestions and constructive criticism offered by one of America's outstanding advertising men might well be kept before you at all times as you prepare advertising copy:

- (1) Think of advertising copy as an attempt to sell something in print.
- (2) People read but little, but they buy much.
- (3) To sell through an advertisement, talk the language of common folks.

- (4) An amateur uses a lot of big words to show his mastery of English; the master of advertising use some syllable words thereby showing his knowledge of the job.
- (5) There should be one thought in each advertisement that stays with the reader and urges action.
- (6) Such a thought may be price, a certain feature, or the idea of quality.
- (7) Good copy should center about just one idea.
- (8) Be cautious of clever ideas or frequent changes in style.
- (9) Don't try to be brilliant.
- (10) The most important things are the reasons behind your product.
- (11) Make such reasons different from the other fellow's reasons.
- (12) Coordinate your advertising with all other merchandising plans of your business.

Arthur Brisbane once said that good advertising copy must make people do five things. They must SEE it, they must READ it, they must UNDERSTAND it, they must BELIEVE it, and they must WANT it. If your copy fails in any one of these five things, it fails entirely.

Don't let these things scare you, for if you are sales minded, write your copy from a sales angle, analyze it, tear it apart and put it together again and again, you are bound to produce something worthwhile. Analyze each advertisement in relation to the results obtained. Benefit by the successful ones, and learn what your mistakes are from the "duds." Many merchants like

Why Accept Anything Less?

QUALITY HEATING SINCE 1846



FOR ALL GASES

UTILITY HEATERS

RADIANT HEATERS

HEAT-LITE &
RADIANT LOOS

GAS-COAL BASKET

VENTED & UNVENTED
CIRCULATORS

RECESSED
WALL HEATERS

AUTO-CONTROLS,
HEAT BOOSTERS,
DRAFT CAPS

FAN-FORCED
CIRCULATORS

RADIANT CIRCULATOR NO. 020
This unvented model heats by radiation and Circulation. Employs unique design of radiator . . . has inner heating section with radiating louvers to assure maximum heat flow in all directions. Offers high capacity circulation and quick response. Quality built, quality equipped. Baked enamel finish . . . Brown & Beige.

INPUT CAPACITY 20,000 Btu.

Write
for
catalog



Brilliant Fine
GAS HEATERS
THE OHIO FOUNDRY &
MANUFACTURING COMPANY
STUEBENVILLE, OHIO

yourself without any special training or experience other than that learned from drafting their own advertisements have become adept at writing compelling ads.

Copy and Art Work Detailed

When you come to so-called "hand-out" literature or envelope stuffers you are up against an entirely different proposition. Such advertising requires a certain amount of art work and the copy is usually more detailed than in newspaper advertisements as it is quite often handed to prospects who have shown an interest in either a particular appliance or in your service.

When it comes to printing of this type, don't trust it to a local printer just because he happens to be handy or is a friend of yours. I have seen many good advertising pieces spoiled in this manner. The newer printing processes, such as "offset" require equipment that costs thousands of dollars in which very few printing plants can afford to invest.

Don't be persuaded that the local print shop, with copper plates, hand set type and a 10" x 12" press, can do as good a job for you on this type of work. Poor advertising pieces are sure to have an unfavorable effect upon your prospective customers.

Appliance manufacturers are well aware of the value of attractive advertising and they can supply you with mailing pieces which apply to their particular appliances for a very nominal sum. Use this literature copiously; put an envelope stuffer into every envelope that

goes out to your customers and your prospects.

A set of pigeon-holes on a table in front of where you process your mail is of great help in doing an effective job of mail advertising. These compartments should contain advertising pieces of the stuffer type.

However, a word of caution about direct mail: If you have just sold Mrs. Jones a "Queen's Taste" range for example, but since that time have taken on the "Angel's Preference" line, it wouldn't be appropriate to mail Mrs. Jones a stuffer about "Angel's Preference" ranges. If Mrs. Jones hasn't a gas-fired water heater, that is the next thing you should try to sell her, or perhaps a gas refrigerator or space heater.

The value of direct mail advertising, if properly handled, is not to be denied. I haven't much faith in pieces of advertising mailed simply to "boxholder" or "R.F.D. Route No. 1." People like to hear their names or see their names in print, for it pleases them to be recognized as an individual apart from the unnamed masses.

Results of 1% Considered Good

It may cost you a little more for postage and take more time to address such mailing pieces but it will pay you to invest the additional money and time. Results are considered to be good if you make sales to 1% of the people to whom you mail advertising. I have known mail campaigns to result in 3% sales, but this is unusual.

It is difficult to trace the results of a direct mail campaign, for a

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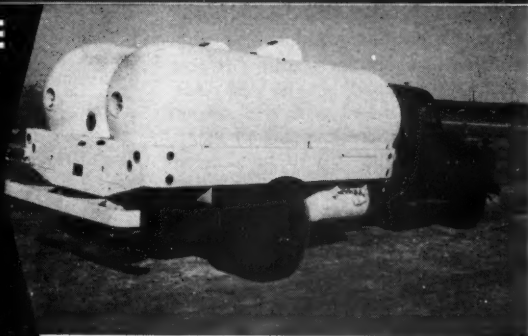
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Look at Them From Any Angle . . .



**LMC HOME
DELIVERY
UNITS
LEAD IN
SAFETY
SERVICE
SAVINGS**



LMC Home Delivery Units are available in six sizes with capacities from 1400 to 2400 gallons. The 1400 gallon Unit is shown above, the Unit at left has a capacity of 2000 gallons.

LMC Home Delivery Units are engineered to make you money every day of their long life . . . they are designed and constructed with accent on greater safety, longer life, and low-haul-cost-per-mile.

High tensile steel and indented fittings assure a superior safety factor; light weight, low center of gravity, large capacity pumps and valves allow you higher payloads.

Box 1138 Lubbock, Texas Dial 3-4631

LMC
Lubbock Machine & Supply Co.

piece of advertising mailed to Mrs. Jones may find its way into Mrs. Smith's hands and be the start of a chain of events which persuades her to buy.

Be sure that your business name appears on every piece of advertising that you mail or hand out to people. It isn't necessary to have a printer prepare imprints unless you have a large number of pieces to be imprinted. Select the style and size of type that you wish to use for imprinting your name on sales literature. Go to a good manufacturer of rubber stamps and have him make a rubber stamp for you. Purchase a good stamp pad from him that is inked with an intense black. If you are careful in aligning the imprint it will be difficult to pick it out from a regular printed job.

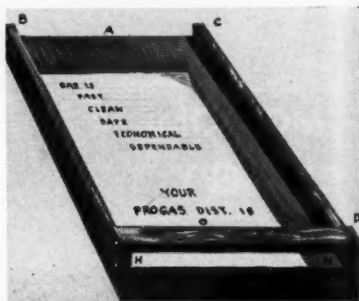
A sketch of a home-made device which will help you in aligning rubber stamp imprints is shown in *Fig. 1*.

You are also going to need good letterheads and envelopes. It might pay you to employ a commercial artist to create a distinctive letterhead and design a trademark for you. Don't crowd a lot of copy into your letterhead. You should avoid listing by name a lot of appliances down the lefthand side of the page. You can mention gas ranges, gas water heaters, gas refrigerators, gas space heaters and the name of the gas that you are selling.

If you must, you can include washing machines, mangles and other electric appliances if handled. Let's suppose that you do mention "Swish-Whirl" washing machines by name. The appliance manufac-

turer may wish later to change dealers for some reason. In some states they can insist that you eliminate their trade name from all of your letterheads and advertising material. If this is required you will have a lot of messy letterheads

Figure 1



"A" is a smooth board or piece of plywood measuring 14" x 16" onto which strips "B" and "C" are fastened. These two strips should be about 1" wide by 3/16" thick. Strip "D" is of 3/4" stock about 2" wide and it is fastened on top of strips "B" and "C" as shown, leaving an opening between these two strips which is designated by "h" and "h". The advertising to be stamped is placed on the board against strip "B" or "C", and it is allowed to slide under strip "D" to the proper position. The rubber stamp is held against edge "O" of strip "D" when the imprint is made. Pencil marks may be made on strip "B" or "C" to designate proper position of the top edge of the advertising being stamped and pencil marks can also be made on strip "D" so as to properly center the rubber stamp in relation to the advertising being stamped.

with "Swish-Whirl" crossed out, or you will have to throw all of this material away and have new letterheads and literature printed.

You may also have to make a lot of embarrassing explanations to your prospects if the "Swish-Whirl" line is moved across the street to a competitor. It is a matter of personal opinion as to whether you should list a lot of appliances on your letterhead, but it would be much better to simply mention types of gas appliances.

Two thoughts always come to me when I receive a letterhead with a lot of listings upon it. The first one is "here is a little fellow who is trying to be a big shot." The second is, "How can any one man or business know all of the answers to so many lines?"

You will be judged to a great degree by the appearance of your letters and your letterheads. They reflect your personality. Don't sell yourself short by a poor printing job or by poor paper. Settle for good bond paper. Buy a book which will tell you how to write a good business letter and avoid stilted language and hackneyed phrases. Some men, when dictating a letter, sound as if they were delivering "The Sermon on the Mount." When I receive such a letter I always think of the writer as being a little fellow who is either impressed by his own importance or one who is trying to impress me with it. Keep your letter to the point but not brief to the point of curtness.

To illustrate these points here are two letters written by employees of

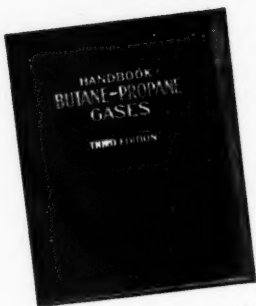


Designing effective and interesting letterhead, envelope and sales literature is important to the success of your business. Trade emblem and company insignia should appear on all printed literature for continuity.

a large dry goods store dealing with the rural trade in Maine. The first one was caught by the store manager before it was mailed, and it is an example of many things which should not be written. The second illustration is the revised letter as it went to the customer. See *Examples 1 and 2*.

I doubt that Mr. Roe knows or cares what "inst." or "viz." mean, and Doe's "begging" probably would have failed to impress him. Doe seems to be more concerned with the old account than continuing to receive Roe's business and the letter has a "pay-up-or-else" implication, according to Example 1.

HANDBOOK BUTANE-PROPANE GASES



- Up-to-date technical facts on LP-Gases.
- 352 Pages. Illustrated with Charts, Diagrams and Photographs.

Check this partial list of contents.

INTRODUCTION

The Progress of the Industry and the History of its Development.
The ABC of LP-Gas, an Introduction to LP-Gas Operations.

PHYSICAL AND CHEMICAL PROPERTIES

Properties of the Hydrocarbons in LP-Gas.
Properties of Butane-Propane Mixtures
Volume Correction Factors
Analytical Determination and Testing

PRODUCTION OF LP-GAS

Natural Gasoline Plants, Recycling Plants,
Oil Refineries

TRANSPORTATION AND STORAGE

Delivery by Truck, Rail, Water, and Pipe
Lines
Storage Tank & Pressure Vessel Design
Liquid Metering and Pumping Systems

UTILIZATION OF LP-GAS

Comparative Performance with other Fuels
Appliance Installation and Testing
Domestic Applications
Commercial Applications
Industrial Applications
Enrichment, Peak Load and Standby Uses
A Fuel for Internal Combustion Engines

DISTRIBUTION OF LP-GAS

Installing and Servicing LP-Gas Systems
Semi-Bulk Systems
Bottled Gas Systems
Gas Utility Service from Central Plants
Multiple Utility Service from a Central Plant

REGULATIONS

N.B.F.U. Pamphlet No. 58 (1947).
Motor Carrier Regulations
Freight Regulations
Unloading Tank Cars
Marine Regulations

APPENDIX

LP-Gas Insurance
Handy Tables for Field Use
The Interchangeability of Other
Fuel Gases with Natural Gases
Flame Weeding
Bibliography
Glossary of Terms

THIRD EDITION

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YOUR COPY
TODAY **\$7.50** PER COPY

We pay postage on orders accompanied by check or money order. In California add 23c for sales tax. Orders from individuals must be accompanied by amount of purchase unless credit has been established.

Published by

BUTANE-PROPANE News

198 So. Alvarado Street
Los Angeles 4, California

EXAMPLE 1. THIS WASN'T
MAILED

Portland, Maine.
April 29, 1950.

Mr. Richard Roe
P. O. Box 117
West Overshoe, Maine.

Dear Sir:

Your letter of April 27th inst. has been referred to me for attention in reply to which we beg to state that we do not have any more of the heavy wool socks to which you have reference. We now stock a heavier grade which will cost you 22c more per pair, viz. \$1.98 f.o.b. our Portland warehouse.

Our accounting department has called to my attention that you haven't paid for the last socks we shipped you. We cannot ship any more merchandise to you until you pay your old account. Please give this delinquency your immediate attention.

Awaiting your immediate reply,
we are,

Most respectfully yours,
BIG, BIGGER & BIGGEST, INC.
JOHN DOE, Manager
Mail Order Department.

Letter Number 2 is a little longer, but it says much more than letter Number 1; it is courteous, it asks for that past due bill in a nice way, but it is none the less firm. Richard Roe must reply to it if he

wants the socks, and he isn't any dummy. He knows that he won't get the socks if he doesn't remit!

Enough for your business letters, for I do not claim to be an authority upon them. I only know the

Long on Service..

.. short on repairs

For metered service installations—the service of standardized measurement, choose the meter with a record for long service and low maintenance costs—the Sprague Zephyr, with the capacity and stamina for the future.



SPRAGUE
Zephyr
METERS

THE SPRAGUE METER COMPANY
BRIDGEPORT 4, CONN.

kind of letters that I like to receive and the kind that I try to write. I have found that a personal touch, a little salesmanship in writing and a whole lot of tact pay off in results obtained.

What do your letters have to do with advertising? Plenty!

EXAMPLE 2. THIS WAS
MAILED

Every printed or written word directed to the public has its effect in the public's opinion of you. It is all advertising, and you are going to be a user of many types of advertising in the years to come. A large measure of your success or failure depends upon how well you use them.

Portland, Maine.
April 29, 1950.

Mr. Richard Roe
P. O. Box 117
West Overshoe, Maine.

My dear Mr. Roe:

I'm sorry, but we do not have more of those good wool socks which you ordered in your letter of April 27th. We think that we now have something better because it is heavier, closer knit and softer. These new socks would cost you only \$1.98 per pair and I am sure you would find them to be more comfortable and more serviceable.

Why don't you let us ship you a pair of these fine new socks for your inspection? We'll be glad to do this, if you will only give us permission to do so, and at the same time you can clean up that small balance of \$1.78 which must have escaped your attention.

It is good to know of your continued interest in the goods which we have to sell, and we hope that we can serve you with the better merchandise which I have suggested.

Sincerely,

BIG, BIGGER & BIGGEST, INC.
JOHN DOE,
Mail Order Department.

PRODUCTS

Power Driven Pump

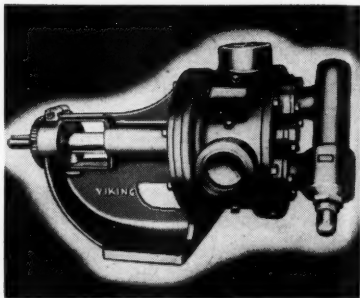
VIKING PUMP CO.
Cedar Falls, Iowa.

Model: Viking

Description: Pump is equipped with mechanical seals as well as the conventional metallic packing. It ranges in size from 5 to 55 gpm in both the motorized bulk station units and the truck mounting styles.

The leak-proof design of the mechanical seal installed directly behind the rotor of the pump permits the seal to be operated in the liquid being handled. The bearing for the pump shaft is located outside the seal, permitting lubrication outside the pumping chamber.

Some additional features of the

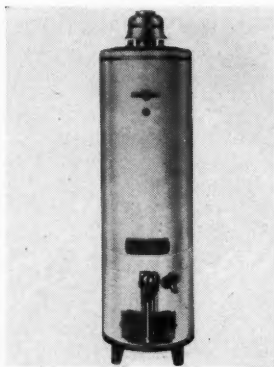


Viking pump are revolvable casings for handy port location, safety valve on head, special treated head and bracket gaskets and rigid thrust control.

Water Heater

HOTSTREAM HEATER CO.
2363 E. 69th St., Cleveland.

Model: "Wont Rust"



Description: Clear, rust-free water and longer life of heater tanks results from the use of a stone lining in a new line of automatic storage-type water heaters.

Lime and sediment will not adhere to the aggregate stone lining, which is $\frac{1}{8}$ in. thick. This type of stone is 200% more water absorbent than other forms of stone lining. There is no corrosion, no rust, and no lime deposit inside the tank.

Another feature is the "plastic bond"—a plastic liner between stone and steel which absorbs the variance in contraction and expansion between these dissimilar materials and prevents cracking or other damage to the stone lining.

Lower fuel costs and improved efficiency are obtained since the lining serves as additional insulation.

Domestic Range

FLORENCE STOVE CO.
Gardner, Mass.

Model: Embassy 4820

Description: Range has titanium porcelain finish and fluted bar-type handles. It is equipped with the Florence Broilercue light and a fully automatic electric clock which controls the oven.

The multi-feature top gives you three ranges in one, with the grid-dle, the 5th burner, or extra work space. The Broilercue has a 3-position porcelain pan and grille which swings out easily on a heavily reinforced door.

The warmer compartment below the oven keeps food warm until ready to serve. The service drawer, located below the Broilercue, is a convenient storage for pots and pans.

The range is designed for flush-to-wall installation.



Gas Heater

REZTOR MANUFACTURING CO.
Mercer, Pennsylvania

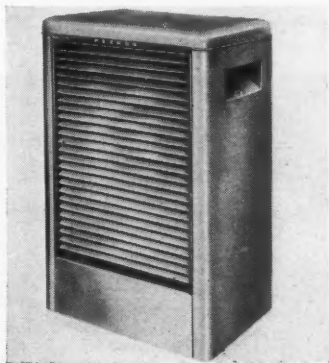
Model: Reznor FM Series

Description: The unit is a completely automatic, vented, warm air circulating type heater available in three sizes; 25, 50 and 75-thousand Btu capacities. Thermostatic control is included as part of the standard equipment.

The dimensions of the heater reduce height in better proportion to width and depth, improving the styling for home and office.

The new louver panel permits individual adjusting of the full-width louvers, which enables the user to direct the elevation of circulated warm air easily. The smooth, hard Perlite coating has a grey-green finish, which makes it ideally suited to easy cleaning requirements.

Another attraction of the heater is the new name plate at the top of the louver panel.



PRODUCTS

Trailer Range

SUNRAY STOVE CO.
Delaware, Ohio.

Model: 528

Application: For trailer and compact home kitchens.

Description: This space-saving 30-in. width range has all the features of a home-kitchen range. Some of the features include top-of-range work area, storage cabinet, full-size oven and broiler and electric appliance outlet.

While this new range has all the attractions of a big range, this model occupies only 10 in. more



floor space than the usual trailer-coach range now in use.

Liquid Carburetion System

GARRETSON CARBURETION CO.
Roswell, N. M.

Model: Garretson Carburetion Kit

Application: For farm tractors and farm stationary power units.



Description: This compact assembly insures maximum economy and performance since it can be used for either liquefied or vapor withdrawal, and the fuel supplied the engine is always at a constant cool temperature, regardless of operating conditions.

The accessibility of the two valve seats used in the control mechanism enables infrequent maintenance. The entire assembly, including filter, is on an assembly plate which can be mounted with two bolts; thus, it is only necessary to make the hose connections to the carburetor, to the engine cooling system, and fuel inlet connection.

Bulk Plant Meter

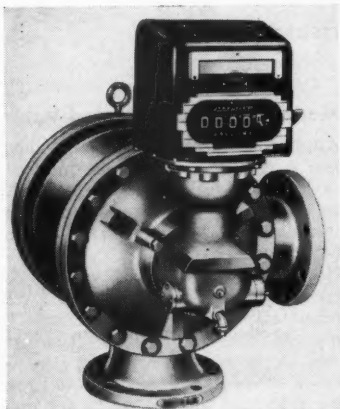
ROCKWELL MANUFACTURING CO.
400 No. Lexington Ave., Pittsburgh.

Model: Rotocycle 6 BLX

Application: For liquid accounting of inventory withdrawals of aviation gasoline, measurement of refined petroleum on loading racks, and in chemical plants, lubricating oil plants and industrial proportioning operations.

Description: This light weight, six inch rotary, positive displacement meter is designed for continuous operation at working pressures up to 125 psi and flow rates up to 650 gpm. It is available in an aluminum casing which is non-corrosive when metering high octane aviation gasoline. Its light weight, 207 lbs., facilitates handling and reduces shipping costs.

Strainers, air eliminators, register



extensions, swivel adapters and remote registration are standard accessories. The meter is available with non-reset, small and large reset and ticket printing registers.

LPG Cylinder

PRESSED STEEL TANK CO.
1445 S. 66th St., Milwaukee.



Model: Hackney PC-420

Description: Propane capacity of this cylinder in pounds is 420. Other specifications: butane capacity, 500 lbs.; water capacity, 1000 lbs.; approximate tare weight in pounds (painted) 437; inside diameter, 29 in.; cylinder height, 48 3/4 in.

Cylinder markings include ICC markings, dealer symbol and serial number inspector's official marking, and original test date.

According to the manufacturer, two-piece construction, featured in Hackney cylinders, permits production of the lightest weight cylinder possible under existing ICC specifications and consistent with service requirements.

PRODUCTS

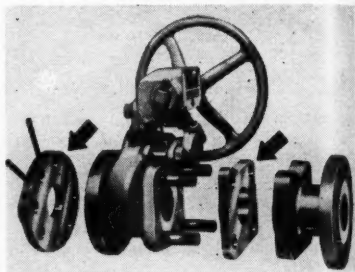
Heated Valves

OKADEE CO.
Chicago, Ill.

Model: Electrically-Heated Valves

Application: To keep valve mechanism clear of frost and ice in liquid carbon dioxide lines at temperatures as low as 110° F. Other applications include both hot, cold and viscous liquid and gas lines.

Description: All heated valve sizes from 2 in. to 6 in. are available with pneumatic, hydraulic, solenoid or manual control. Heating elements can be provided for either 110 or 220-volt operation, with inputs ranging from 400 to 3000 watts per unit.



Where flanged type Okadee valves are now in service, heating elements may be installed by exchanging standard studs for studs one inch longer.

Product Information

The Tappan Stove Co., Mansfield, Ohio, has incorporated several features in their Super-Sixty series for greater ease and comfort when cleaning a range. The new "Lift-off" oven sides of the oven without the aid of any tools.

The "Full-out" broiler drawer comes out the full length of the broiler pan, clearing the front of the range. Another new feature is the "Pres-toe" broiler, which makes it possible to withdraw the broiler drawer from the range by merely pressing a pedal.

The lid basket provides storage space for cookie tins and other items stored in it.

A catalog containing descriptions of many new engineering features, new

finishes and new types of heaters has been published by the Ohio Foundry & Manufacturing Co., Steubenville, Ohio. This gas heater catalog, No. 52, is printed in color and displays the complete line of Brilliant Fire heaters for the current season, together with complete technical data for each model.

The Dual Circulator, one of the new heaters described, is a cabinet-model heater with high capacity circulation. The heat, by radiation and circulation, is delivered at the top, front and side louvers of the cabinet.

This model contains a new type of radiator which is an inner heating section with radiating louvers, designed to insure maximum heat flow in all directions.

Quick → Acting

**charging line
valve**



Here's another outstanding Superior safety feature—the trip-lever action of the new quick-acting shut-off valve. The novel diaphragm valve construction assures you of immediate opening and shut-off—completely safe from leaks. Quick-coupler with neoprene nose seat for quick assembly and disassembly. Two-ply, heavy-duty neoprene charging hose and re-usable stems and ferrules on hose ends are other quality features on this Superior equipment.

You can rely on Superior's Symbol of Safety



Superior valve & fittings company

1509 West Liberty Avenue • Pittsburgh 26, Pennsylvania

Applicants Sought for Nine Gas Fuel Tech Scholarships

Southern Technical Institute has been authorized by the Gas Fuel Technology Foundation, a special LPGA department, to award nine 18-month scholarships for the course in gas fuel technology now being conducted at Chamblee, Ga.

In order to provide equal opportunity to qualified applicants in all states, a master record has been set up to determine the order in which awards shall be granted. Deadline for awarding available scholarships was May 1. For states which did not have an eligible applicant at that time, the award will be held until June 15.

Eligible states which may still select candidates are, according to the latest LPGA bulletin, Arkansas, Michigan, New Hampshire, Montana, Wyoming, and Nevada.

Ben Marsh Quits LPGA Post; Opens Counselling Service



BEN MARSH

to help dealers and distributors to make possible the most profitable distribution of time and capital.

Mr. Marsh, headquartering in San Francisco, Calif., will specialize in credit, sales administration and finance counselling.

Benedick A. Marsh, who recently resigned his post as West Coast Secretary of LPGA, has announced the establishment of a management analysis service for L. P. gas dealers and distributors.

His new personalized service will be designed



Cut-away storage tank serves as the throne for the L. P. gas twins, Miss Butane and Miss Propane, who ruled at the Liquefied Petroleum Gas Association convention in Chicago, May 12-14. The twins are Gem (left) and Jet Dumas.

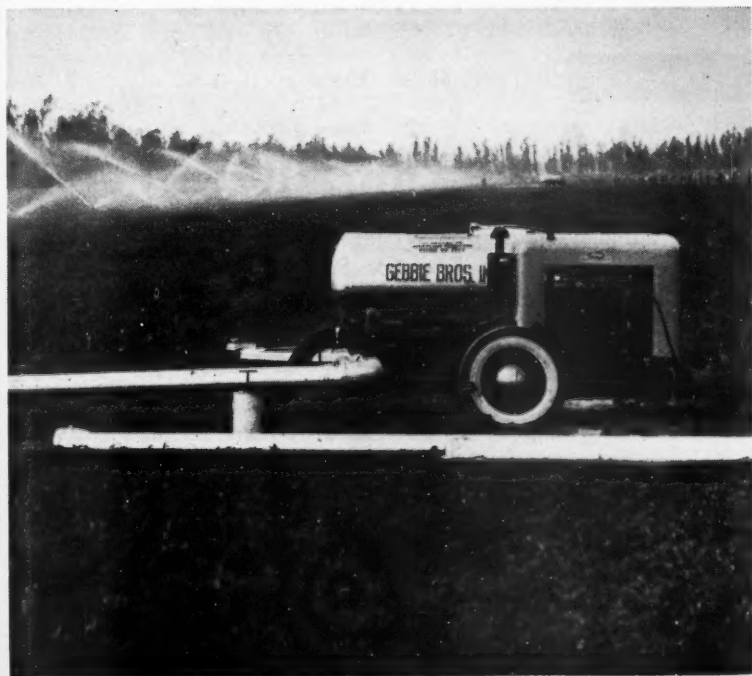
Butane-Propane

POWER SECTION

Installations

CARBURETION

Conversions



LPG powers engine for irrigation sprinkler system.



One of the fleet of tractors converted by Gebbie for Ellena Bros. Winery Co. in southern California.

Power

Load Balancing In Reverse

Summer Load Tops Winter Volume with Gebbie Bros. Heavy Irrigation Pump Gallonage.

THE Gebbie brothers, Tom and Vern, butane-propane dealers of Pomona, Calif., are in a most unusual position. They must look for domestic customers and house heating installation to balance a heavy summer load which they have developed through carburetion.

The industry will recognize this load balancing procedure as "reverse English," but there is nothing wrong with the way it works out. By a little ingenuity and extra effort to keep things on a level keel, they have been able to maintain a satisfactory winter-summer ratio

most of the period since starting in the carburetion and liquefied petroleum business in 1946.

Tom Gebbie had been a mechanic in the Pomona Ford agency for about 10 years. During that time he made a few conversions of automobile, truck and irrigation pumping engines. He had his share of trouble making those early carburetors work, but after the bugs were worked out the results with the liquefied fuel were impressive.

Since mechanics who understood dry-gas carburetion were scarce

By **CARL ABELL**

and it looked like an expanding field, Tom began to study the subject. United Liquid Gas Co., of Fresno, Calif., needed a mechanic to handle the installation and servicing of appliances and carburetors. It seemed like less of an undertaking to teach an experienced engine and carburetion man to install appliances, than to train an appliance man to make engine conversions. Tom took the job.

Hundreds of tractor and truck engines were being converted in the Fresno area, and with this new demand, the sale of fuel was skyrocketing. It looked like a winning combination, and Tom wanted to get into the gas business for himself. Then, as now, it required sizeable capital to install a bulk plant, buy a bulk truck, and start a gas business in the customary manner, beginning with domestic service.

His brother, Vern, who had also lived in Pomona for many years, was likewise an engine mechanic, and between them they knew a great many of the local farmers. They thought: Why not pool their resources, set up a butane carbu-

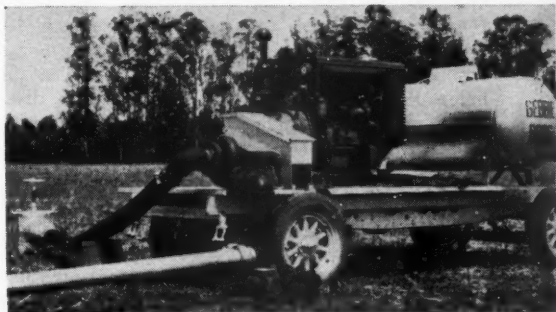
retion business in Pomona, get a delivery truck, and start building a gas business serving their carburetion customers? Being close to a source of fuel, they could get along without a bulk plant until the business grew to considerable proportions. And they believed that they could make their living from the mechanical work of installing the carburetion systems while the business was growing.

This was quite different from the domestic appliance business, where the dealer had a heavy inventory of appliances, which he sold at a marginal profit, and got almost nothing for installation labor. They also figured their gas business would grow faster if based on carburetion, as the annual consumption per customer runs a great deal higher than it does in domestic applications.

Their analysis proved to be correct.

The carburetion shop has been the backbone of the business from the first day, and has provided a substantial part of the operating profit. No attempt is made to limit work to the company's local gas

One of 15 Gebbie portable pumping units, used in irrigation, including IHC industrial engine and 250-gal. tank.





Tom Gebbie converts a Buick to LPG at headquarters shop. Three of company's delivery trucks also are shown.

customers. Passenger automobiles and trucks, which may never buy a second fill of gas at the Gebbie service station, are converted right along with the tractors, farm trucks, and irrigation engines belonging to their regular gas customers. Several fleets of line-haul trucks also have been equipped with LPG carburetion equipment in the Gebbie shop.

A few of the early conversions were irrigation pumping engines. Since the California irrigation season was long and the fuel consumption high, these were very desirable jobs from the standpoint of a future fuel market. But the competition with electricity for this type of load was rough, and sales were few.

The widespread development of irrigated pastures down the valley below Pomona changed the picture. Most of these ranches had been laid out and piped for irrigation by the vat method, in which the water is introduced at one end of the vats, and allowed to flow several hundred feet to the other end. The end close to the inlet always got more water than it needed while

the stream found its way to the other end and soaked in to sufficient depth. This method worked out satisfactorily with alfalfa, which has deep roots and is not badly affected by the drying out of the surface, which always occurred between soakings.

The clovers and grasses in the "irrigated pasture" mixtures did not thrive on this "feast and famine" basis. For satisfactory production they had to have frequent surface irrigations, and deep moisture was ineffective because the roots never went deep enough. It became necessary for the farmers to change to sprinkler systems. In order to hold down the investment, these systems, which are quite expensive, are made portable, so they can be moved right across a field.

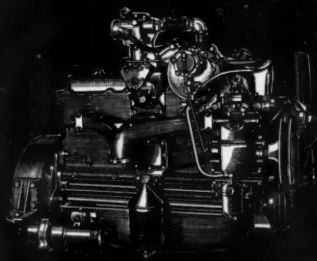
The pressure behind the irrigation district water was not sufficient to operate the sprinklers, so it became necessary to take the water as it flowed from the pipes, and put it through a pump which boosted the pressure high enough to enable the sprinklers to cover a swath of from 80 to 100 feet.

Operating these pumps with

REO *Gold Comet* Engine

now Reo factory designed
and built for . . .

LPG operation!



Yes . . . another great engine is added to the famous line of *Gold Comets* . . . the new REO 142 hp *Gold Comet* LPG.

Here's the *Gold Comet* specifically designed for LPG. Gives you savings averaging up to 5c per mile on fuel alone, reduces crank case oil dilution and carbon deposits, thereby increasing time between engine overhauls by as much as 50%.

The new Reo *Gold Comet* makes full use of LPG fuel characteristics . . . is completely Reo engineered for maximum performance. The new Reo LPG Trucks and Tractors give you all of the advantages of *Gold Comet* power plus more-load design for higher payloads, better braking, easier maneuverability, longer tire life, roomier cabs . . . and world-famous Reo dependability.

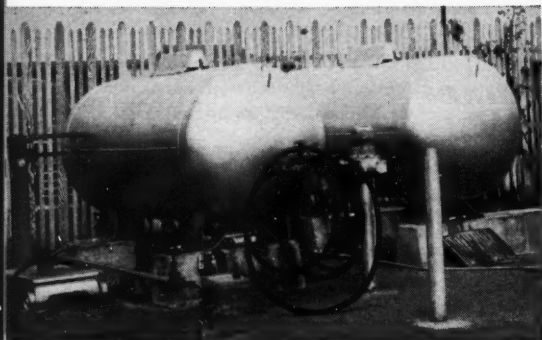
AMERICA'S MODERN
TRUCK ENGINE

AVAILABLE . . .

- Reo Trucks with *Gold Comet* LPG Engines
- Reo LPG Conversion Kit for the 331 Reo Gasoline Engine . . .
- Complete new *Gold Comet* LPG Engine for replacing old, worn-out engines in your present trucks (any make).

It will pay you to investigate the economical Reo *Gold Comet* LPG. Your Reo Dealer will be glad to demonstrate.

REO MOTORS, INC., LANSING 20, MICHIGAN



Twin tank truck service and bottle filling facilities at Pomona plant of Gebbie Bros.

electricity would have required multiple installations, and it was found more advantageous to mount the pumps on trailers, together with the necessary internal combustion engines and fuel tanks. These are moved from pipe line to pipe line as the sprinkler systems are moved across the fields, supplying the necessary power at low investment. Many of these outfits are operating on ranches where there is natural gas for domestic use, and electricity in every building.

The success of the sprinkler irrigation system with wet pastures showed the advantages of that method to the alfalfa growers, but conversion was slow because the ranches were already equipped for vat irrigation, and the change to sprinklers would entail considerable expense, particularly where a pump engine would be required to operate the sprinklers.

To accelerate this trend, the Gebbie brothers made up several demonstration units with 250 and 500

gal. propane tanks, and industrial type engines for which natural gas pistons and heads were available. They offered to supply the engines to ranchers who would agree to use their fuel, adding a certain amount per gallon to compensate for the use of the engine.

This was a good deal for the farmers. Why?

(1) They got their power at lower cost than would have been possible with gasoline engines.

(2) They had no investment in equipment to depreciate.

(3) Their entire power expense was chargeable as operating cost in calculating their income taxes.

Fifteen of these power units, all built from new engines, and mounted on trailers, are now in use on the lease basis, and many more irrigation engines owned by farmers have been converted. Several of these farmers interviewed by this writer said their water requirements and cost were lowered by the change to the sprinkler method of

irrigation, and that they had never pumped water at such low cost with any other fuel.

As these irrigation engines may run almost every day during the 8 to 9 months when normal rainfall is inadequate, they consume considerably more fuel than a tractor engine, and many times as much as the average domestic and heating installation.

In order to keep the summer and winter loads in balance, it has been necessary for the Gebbies to develop extensive home volume. This has required them to range over considerable territory, against strong competition, for they came in late on the domestic business.

Four bulk trucks are necessary to cover the widespread routes. These range in capacity from 1268 to 1660 net gallons. The latest and largest is an IHC model L-200, equipped with 10,000 ft. altitude pistons, cold manifold, and Ensign carburetion. It is used primarily on the irrigation engine route during the summer, but will serve on the long routes up into the mountains when cold weather increases the demand for heating fuel.

While the company has two small storage plants, one of 7500 gallons capacity at Pomona, and another of 10,000 gallons at Bloomington, about 20 miles farther east, only a small amount of the fuel they distribute ever gets into the bulk plant tanks.

For the convenience of passing trucks, a small butane dispensing unit is maintained in a gasoline service station which the brothers operate in the outskirts of Pomona.



The company service trucks have long narrow propane tanks mounted under the body in rear of cab to keep floor space clear. Arrow points to tank installation.

Emergency truck fueling facilities are also available at the Bloomington plant, although no attempt is made to operate this on a regular service station basis.

Appliances are assuming increasing importance in the Gebbie business, because of the increasing volume of domestic gas sales. A small stock of the units most in demand is maintained at Pomona, tucked away at the carburetion shop and at the service station, which is across town.

This may be the "reverse English" way to conduct an L. P. gas business, but appliances are secondary to carburetion in Gebbie's operation. Half of their total volume is engine fuel, and that is the way they prefer it. Deliveries have been consistently heavier in summer than in winter, except for last January, when they had their highest month, due to unusual and almost continuous bad weather.

An Answer To Piston Ring Breakage In Converted Engines

A reader writes: "We are having trouble with piston rings in our converted GMC trucks with 426 cu. inch engines. We find that in about 30,000 miles the top ring grooves are worn very badly, and that the rings are generally broken, and sometimes they come out into the combustion chamber.

We have not heard of this happening on the same model trucks burning gasoline. Our trucks are giving fairly satisfactory power on propane, although it is not always as it should be."—L.O.C., Texas.

Answer—While it would not be possible to make an accurate or complete diagnosis without many more facts, we have run across the condition which you describe in these and a number of other engines, occasionally on gasoline, and more fre-

quently on propane. If your trouble is what we think it is, here is the story:

Piston rings must have a certain amount of "end clearance," which must be maintained throughout the life of the ring. There are two factors which affect this end clearance, each working to offset the other. As the cast iron rings heat up and cool off in their daily service, the crystalline structure of the metal undergoes what is known as "grain growth." This causes the rings to become slightly larger and longer.

At the same time the surface of the ring becomes worn, and this surface wear tends to prevent the ring from becoming crowded lengthwise in the groove. In these modern high compression engines the designers like to make these end clearances as close as is safe, to minimize gas leakage through the gap.

The rates of grain growth and of wear on the surface are taken from experience, but this experience is based on gasoline operation. As is well known, the rate of wear on the rings, pistons, and cylinders in a propane engine is considerably less than it is in the same engine operating on gasoline. Thus the end clearance far gasoline, if set below a certain minimum, will not be sufficient when used with propane or butane.

When the surface wear fails to offset the rate of grain growth, the end gap will close up, and under certain temperature conditions the ring will be tight in the cylinder. When this occurs, a great deal of force is required to drag the ring up and down in the cylinder. This causes an immediate loss of power, and if allowed to continue, the ring will break, the top land of the piston will break, or both conditions will develop.

Evidence that the ring has been operating with too little end clearance will be found in the polished appearance of the ring ends when removed from the engine. Very frequently when the top ring breaks, the second and even the third rings will also show indications of insufficient clearance, and occasionally the second ring will be broken.

When fitting rings to cylinders in engines to be operated on L.P. gas, this lower rate of surface wear should be taken into account and the end gap should be made at least .001" wider per inch of piston

New Tractor Tank Introduced



A new 18-gal. propane tank for Ford and Ferguson tractors has been announced by Manchester Welding and Fabricating Co., Lynwood, Calif. This tank mounts directly behind the driver's seat, out of the way of rear-mounted implements. It comes complete with all mounting brackets, and can be installed in a few minutes. There is no need to cut the hood or remove the gasoline tank when mounting this unit.

diameter than is customary with gasoline.

The trouble described above is not by any means prevalent, nor is it characteristic of any make or model. It is likely to show up occasionally with any engine that has not been engineered specifically for gaseous fuel. It will not develop immediately, but may occur after a few or several thousand miles of operation. There have been cases noted in which operation was satisfactory for 60,000 miles, before the ends butted together and caused breakage.

—Editor.

New Engine Models Show LPG Fuel Sales Potential

Recent months have been unusually productive of new engine models designed to operate on L. P. gas. Reo Motors, Inc., has announced the introduction of an LPG version of their 331 cu. in. "Gold Comet" truck engine, having a compression ratio of 8.2:1; a water jacketed intake manifold completely separated from the exhaust system; steel intake valve seat inserts; stellite exhaust valve seat inserts, and a number of other refinements. This engine is available in the appropriate models of Reo trucks, and as a replacement engine for installation in other trucks.

International Harvester truck division now supplies LPG engines with high compression pistons and cold intake manifolds as optional factory installed equipment in all models of IHC trucks having the "Super Red Diamond" heavy duty engines.

The International farm machinery division has added factory installed LPG carburetion and fuel systems.

In addition, the Twin Coach Co. has made its Fageol propane engine, with compression ratio of 10:1, available for the use of other manufacturers.

Ford has announced three new truck engines with overhead valves as standard or optional equipment in chassis.

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Theodore Legatski Given Hanlon Award At NGAA Convention in Houston

THE Hanlon Award, highest honor in the natural gasoline industry and one of the ranking



THEODORE LEGATSKI

awards of the entire petroleum industry, was conferred upon Theodore W. Legatski, assistant director of research, Phillips Petroleum Co., Bartlesville, Okla., at the 31st annual convention of the Natural Gasoline Association of America, held in Houston,

Tex., April 30 - May 2. Registration was a record 1650 persons.

Presentation was made by NGAA President John F. Lynch, La Gloria Corp., Corpus Christi, who cited that the award was "in recognition of Legatski's 25 years of productive research and guidance in the field of light hydrocarbons, the results of which have served to strengthen and extend the outlets for the products of the natural gasoline industry."

Although Legatski's work has dealt with practically all phases of oil and gas research, he is best known for his contributions in the commercial application of precise fractional distillation as a means of preparing substantially pure hydrocarbons for chemical use, for aviation gasoline blending, and for use as research starting materials.

A highlight of the LPG Forum at the convention was the report on

underground storage in salt formations, prepared by Wharton A. LeBlanc, Hercules Petroleum Corp., Baton Rouge, La., and G. H. Billue, Security Underground Storage Co., Wichita Falls, Tex., given by Mr. Billue.* Included was a report from LeBlanc, also read by Billue, on the first year of operation of above-ground and below-ground storage facilities of General Gas Corp., Baton Rouge. LeBlanc's paper said in part:

"In our first year of operation there has been entirely too much loss by venting the products to the atmosphere for various reasons, such as vapor locks, shifting lines, etc. I do not attribute this to the layout of the installation as much as to the neglect of the operators. I found on our blend hole the product which we removed is identical in characteristics to the product which was put in, but some variation was noticed in the propane. This, again, could be caused by the neglect of the operator in purging the lines, prior to changing products or by the lack of proper maintenance of valves."

R. L. Loofbourow, Mine Construction Dept., E. J. Longyear Co., Minneapolis, Minn., discussed "The Aspects of Excavated Underground LPG Storage." He concluded that, "We regard the excavation of underground LPG storage as akin to mining construction, though differing from it conspicuously in that openings must be tight. We have faith that underground storage is useful and feasible.

* A digest of this paper appears elsewhere in this issue.

We recognize some problems such as the accurate interpretation of the results of core drilling and the problem of sealing rock which is less than ideally pervious. These problems are difficult, but we believe that they can and will be solved."

Another feature of the LPG Forum was a report on "Transportation of L.P. Gas," by Richard H. Lamberton, assistant director, Railroad Transport Div., Defense Transportation Administration.

Lamberton predicted that, barring all-out war, the transportation requirements of the petroleum industry will be met satisfactorily from existing equipment, plus equipment programmed for construction between now and Dec. 31, 1952. "There may be, of course, some spot shortages for individual companies or local situations due to strikes, weather conditions, and other unpredictable occurrences," he said. He added, "Overall, however, there should be no back-

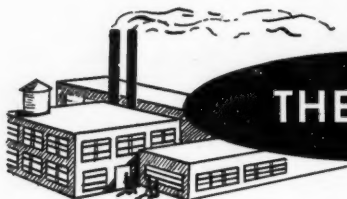
up of petroleum products due to a lack of transportation."

The NGAA re-elected its 1951 officers. They are: John F. Lynch, La-Gloria Corp., Corpus Christi, Tex., president; and Z. C. Ambrose, Southwest Gas Producing Co., Monroe, La.; R. W. Heath, Signal Oil & Gas Co., Los Angeles; F. M. Perry, Cities Service Oil Co., Bartlesville, Okla.; and Albert H. Weil, United Gas Pipe Line Co., Shreveport, La.; all vice president; and William F. Lowe, Tulsa, secretary-treasurer.

The Natural Gasoline Supply Men's Assn., meeting concurrently, elected the following officers: M. E. Duncan, Johns-Manville Sales Corp., Tulsa, president; M. A. Ellsworth, The Flour Corp., Ltd., Tulsa, first vice president; C. C. Clover, Westcott and Greis, Inc., Tulsa, second vice president; H. M. Anderson, Brown and Root, Inc., Houston, treasurer; and William F. Lowe, Tulsa, re-elected secretary.



Among the principal speakers at the Natural Gasoline Assn. of America meeting in Houston, Tex. last month was this panel of industry representatives who addressed a special LPG forum. Left to right, Howard E. Felt, Warren Petroleum Corp., Tulsa, Okla.; R. L. Loofbourn, E. J. Longyear Co., Minneapolis, Minn.; Pascal Martin, Pure Oil Co., Chicago, chairman; Richard Lamberton, Defense Transport Administration, Washington, D. C. and G. H. "Smokey" Billue, Security Underground Storage Co., Wichita Falls, Tex.



THE TRADE



Lawrence R. Carney, former sales manager of the Los Angeles sales office of the Coleman Co., Inc., Wichita, Kan., has been appointed manager of the same office, succeeding the late F. R. Stephens, whose death occurred March 27.

Mr. Carney started his business career in 1934 with Coleman and since then has worked in several production departments.



F. W. ROW

Frank W. Row has been named national LPG sales coordinator for the A. O. Smith Corp., Houston, Tex. Mr. Row was formerly working with the Southwest LPG sales group of this company and has now been promoted to the staff

of Group Executive C. R. Rigby, general manager of the Houston works, where A. O. Smith's line of liquefied petroleum gas systems for farm, domestic, and industrial use is produced.

C. B. Dushane, Jr., vice president in charge of sales of the American

Meter Co., has announced the appointment of Bertram S. Truett as district sales manager in San Francisco and Edward L. Wynne as sales representative in the Chicago sales territory.

A heating and cooling school has been formed by the American Radiator & Standard Sanitary Corp., which aims to make this training available to the wholesalers and retailers of the industry free of charge. The head of the technical school, Clyde A. McKeeman, who was head of the heating and air conditioning course at North Carolina State college, will devise a plan of study.

Two of the most important contributions of the school will be the solutions to difficult field problems and a better understanding of advanced heating and cooling principles. Together, these two advancements should promote better sales, service and installation practices, the company believes.

The Ransome Co. has been awarded a contract by the Norris-Thermador Corp., Los Angeles, for engineering and constructing a propane-air mix standby plant at the Riverbank ordinance works. The plant will provide uninterrupted gas service when natural gas is unavailable. Under a 24-hour per-day load, sixteen 30,000-gal.

propane tanks will supply a nine-day storage capacity.

Work began in May under the supervision of Victor H. Scholz, Ransome engineer, with a completion date set for September.

Fred H. Haggerson, chairman of the board of the Union Carbide & Carbon Corp., has announced that Morse G. Dial has been lected president of the corporation.

Walter E. Remmers was named vice president of the Alloys div. and Kenneth H. Hannan was selected as treasurer of the firm.

The Fulton Sylphon div. of the Robertshaw-Fulton Controls Co., Knoxville, Tenn., has acquired all the manufacturing, sales and patent rights in the seal development of the Rennicks Co. and of Ralph L. Skinner, Sr. of Detroit. The Fulton div. plans to transfer their operations to the Knoxville plant.

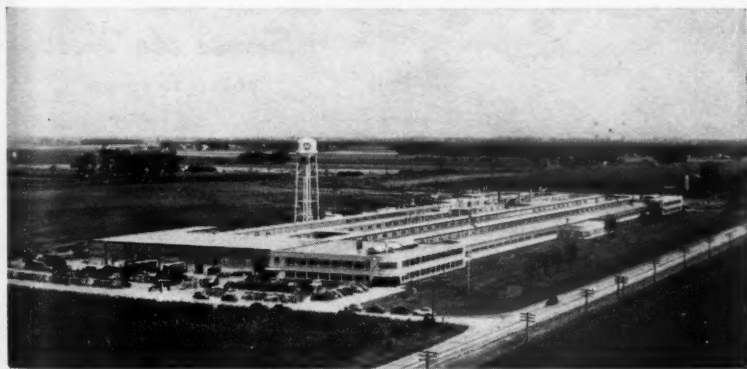
Mr. Skinner will act as consultant on design and application problems

in this program. His son, Ralph L. Skinner, Jr., has joined the sales department as engineer of the Fulton Sylphon div.

Henry A. Ruysser, Jr., vice president and general manager of sales of Black, Sivalls & Bryson, Inc. has announced the formation of a new export department. He also named Harlan L. Mumma as BS&B's Eastern regional sales manager.

Hans Unger has become export manager of the new export department, which is located at BS&B's Kansas City general offices. Mr. Unger has had 27-years experience in Export sales.

C. V. Coons, vice president and director of sales of the Rheem Manufacturing Co., has released the news that Dr. William R. Hainsworth, one of the world's foremost refrigeration engineers, has joined the general engineering division of the company. A University of Washington graduate, Dr. Hainsworth's previous position was vice president and staff



Kankakee, Ill., plant of A. O. Smith Corp. where the company's water heaters are produced. Output of the firm's "Permaglas" heaters will reach 50,000 monthly by 1953.

consulting engineer for Servel, Inc. He served with the Office of Scientific Research and Development during World War II.

Mr. Coons also announced the establishment of a new Equipment Container div., which was created because of the increasing demand for such items as hermetically-sealed, shock-mounted steel shipping containers for aircraft engines.

Frederick J. Blume was appointed national manager of this division, with Andrew W. Hughes as assistant manager and Ray W. Thrasher as chief project engineer. Area representatives are as follows: New York, E. E. Elliott; South Gate, Calif., R. L. Wilson; Washington, D. C., W. S. Davis; Dayton, Ohio, C. P. Haskell; Chicago, Ill., G. T. Reinert.

According to J. F. Ray, vice president in charge of sales for the General

Controls Co., George Crothers was appointed manager of the Toronto branch office. The new branch office will enable the company to more closely serve customers in the Toronto area in handling sales, engineering and service on the company's extensive line of automatic controls.

Richard Meisenbach, director of the Special Products div. of the J. B. Beaird Co., Shreveport, Louisiana, has been given the position of branch chief in the Engine and Turbine div. of the National Production Authority in Washington, D. C.

Mr. Meisenbach, who will be loaned to the federal agency for six months, will be in charge of the sections concerned with the manufacture of tanks, heat exchangers, fabricated metal piping and water softeners.

C. S. Stackpole, vice president





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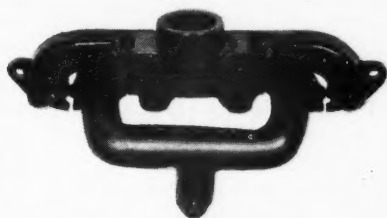
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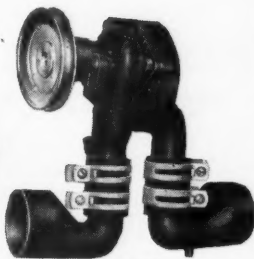
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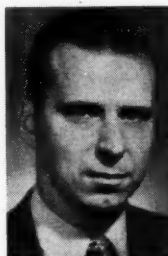
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of the Williams div. of Eureka Williams Corp., Bloomington, Ill., has announced the formation of the Williams Gas-O-Matic div., which will promote and sell a new line of automatic gas-fired heating equipment. Under the direction of A. F. Ward, sales manager, factory sales engineers are being located in various marketing areas throughout the country.



FRED S. VICTOR

Fred S. Victor has been appointed director of supply and distribution by the Universal Petroleum Co., Tulsa.

Mr. Victor is a graduate of Oklahoma A & M engineering school and worked with the Phillips Petroleum Co. for the past 13 years, part of which time he spent in the L. P. gas dept.

As the result of an expansion program, C. A. Reese has filled the new office of plant superintendent at Trinity Steel Co., Inc. According to "Bull" Johnson, sales manager, lunch room facilities to accommodate 50 people will be a part of the over-all program now under way at Trinity Steel.

The appointment of I. E. Killian as manager of liquefied petroleum gas sales for Esso Standard Oil Co. has been announced by L. E. Ulrope, vice president of marketing.

Mr. Killian, who succeeds C. A. Breen, resigned, was formerly LPG

BUTANE-PROPANE News

sales manager in the North Carolina division. He has been with Esso for more than 20 years, serving in various sales positions and as head of the fuel oil, burner, and liquefied gas department.

L. J. Fageol, president, Fageol Products Co., Kent, Ohio, has announced the appointment of A. F. Siers as sales manager of the motor coach engine division of the company.

A veteran of 35 years in the automotive industry, Mr. Siers will be in charge of sales of Fageol and Fageol-Leyland engines to bus, truck, and industrial users of engines. The complete lines of Fageol propane and gasoline engines and Fageol-Leyland diesel engines were recently made available to all bus builders.


C. B. Truitt has joined the Hiwan Petroleum Co., Houston, Tex., as vice president and manager of sales, according to M. L. Mayfield, executive vice president.

A graduate of the University of Oklahoma, Mr. Truitt has been affiliated with Hanlon-Waters, Inc., A. O. Smith Corp., Grove Regulator Co., and the LPG gas distribution business.

His new duties will include managing sales of various petroleum products for the Hiwan Co.

J. M. Sappington was elected vice president in charge of operations of the Barnhart Hydrocarbon Corp. He formerly was manager of the Barnhart gasoline and carbon plants, located at Big Lake, Tex.

A registered professional engineer, Mr. Sappington is the chairman of the Oil Industry Information committee of Reagan county for the API.



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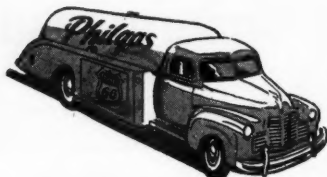
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Offices located in Amarillo, Tex., Atlanta, Ga., Chicago, Ill., Denver, Colo., Des Moines, Ia., Pontiac, Mich., Indianapolis, Ind., Kansas City, Mo., Milwaukee, Wis., Minneapolis, Minn., New York, N. Y., Omaha, Nebr., Raleigh, N. C., St. Louis, Mo., Tulsa, Okla., Wichita, Kan.

Central States LPGA Membership Hits 211

Total membership of the Central States district has reached 211 members, 90 from Oklahoma and 121 from Kansas, according to an association bulletin. With seven months left of 1952 it is the two-state group's hope that a membership of at least 250 active L. P. gas dealers will be reached by year's end.

The L. P. Gas Management Short Course held in April at University of Kansas had an enrollment of 85 students. The course was outlined by the Fifth district Education Committee of LPGA under Homer Devault, Pratt, Kan., chairman.

Northwestern States Holds Seattle Meeting

An excellent attendance was reported at the Northwestern States LPGA convention in Seattle, Wash., Apr. 25-26 at Olympic Hotel. The joint meeting of groups from Washington, Oregon, Idaho and Montana heard a number of prominent industry speakers.

Speakers included Gov. Arthur B. Langlie of Washington, W. R. Sidenfaden, Suburban Gas Service, Inc., Upland, Calif., who discussed "How to Live with Natural Gas"* and Dan Perkins, California Bureau of Weights and Measures, who talked on "Correcting L. P. Gas Meter Losses."

Other talks were delivered by Fred W. Rowe, Liquefied Gas Corp., Seattle, who said "Gas Has Got It Per Gallon." and C. L. Parkhill, Calor Gas Co., San Francisco, who discussed carburetion problems. M. A. Ennis of LPGA presented a film on "Adequate Storage." A social program at Gaffney's Lake rounded out the program.

* Highlights of this talk are presented in an article "You Can Live—and Thrive— with Natural Gas" elsewhere in this issue.

Current Reading

ANALYSIS OF FUELS AND OILS

—By J. R. Campbell and W. Gibb. Published by the Chemical Publishing Co., Inc. This is a guide to the evaluation of fuels, including oil and its products and coal. It is a collection of established experimental methods from which may be selected a course of practical work giving training in fuel analysis.

In its presentation of gas analysis, a few typical and well known gas analysis units have been selected to lead the student from the practical unit to the more precise type in easy stages.

Brief resumes of the theoretical principles underlying the methods give background information relative to the experimental procedures. Many tables on numerical data and equations for the calculation of results are also included. Price \$4.

THE PETROLEUM DICTIONARY

—By Lalia Phipps Boone. Published by the University of Oklahoma Press. This book is a guide to the language of the oil field, containing more than 6000 technical and nontechnical words and expressions relative to the four major branches of the petroleum industry: exploration, production, pipelining, and refining.

Also included are the names and nicknames of towns, fields, wells, oilmen, companies, and geological formations and the slang of the oilfielder. Price \$5.

LPG Outlet Established In Salina, Kan.

John E. Carlin has been named resident agent of Skelgas-Skeltane Service Inc., Salina, Kan.

The new firm, recently incorporated, will handle gas and appliances.



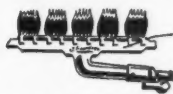
Circulating Heaters



Model 3840 R

New Vented Radiant Circulator

A distinctively designed new vented radiant in Hammerloid Brown Finish and chrome trim. This heater combines the advantages of a radiant heater with that of a circulating heater. It has a Pyrex glass front and built-in draft diverter. The one piece cast iron burner



is a scientifically designed unit that insures perfect, odorless combustion. Automatic heat available with Robertshaw

Unitrol. Sold factory equipped when specified. Snap-action thermostats, A.G.A. approved and 100% safety pilots also available.

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Give healthful radiant heat in addition to circulating heat, using cast iron odorless burners. A.G.A. approved.



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Tulsa, Oklahoma

Legislative News

ARIZONA

Senate Bill 23, covering the venting of gas appliances has been enacted into law. It requires that gas appliances hereinafter installed at tourist courts, camps, hotels, etc. bear the AGA approval and that space heaters or water heaters hereinafter installed in tourist courts, etc., be vented.

The Arizona legislature has adjourned and all other bills affecting the industry died.

KENTUCKY

Revision of Kentucky's L.P. Gas Law has passed the 1952 legislature and becomes effective Jan. 1, 1953. Licenses on L. P. gas handlers will be based on actual operations within the state. Licenses fall into two general classifications: bottled, up to 500 customers—\$50, and bulk, or bottled over 500 customers,—\$100. Enforcement is continued in the hands of the Commissioner of Insurance. Fines for violations are set at not less than \$25 nor more than \$200.

MICHIGAN

House Bill 292 regulating the transportation of flammable liquids and compressed gases has been signed by the Governor.

MISSOURI

Senate Bill 269 amending the motor fuel use tax law has been approved by the Governor.

NEW JERSEY

House Bill 481, covering weights and measures regulation on L.P. gas sales, has been passed in both the House and Senate.

BUTANE-PROPANE News

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The complete line of Viking power driven LP-gas pumps can now be furnished with either mechanical seal or metallic packing. Both available in the complete range of sizes 5 to 55 GPM.

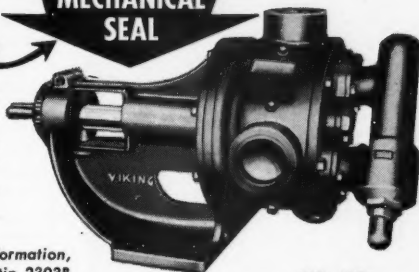


FIG. 190

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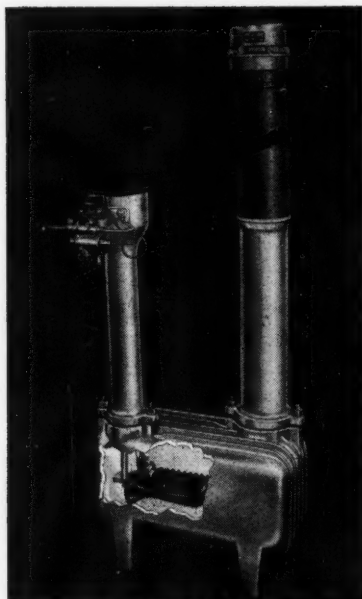
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Vent pipe Weep Holes plus $\frac{3}{8}$ " thick cast construction eliminates condensate problem.

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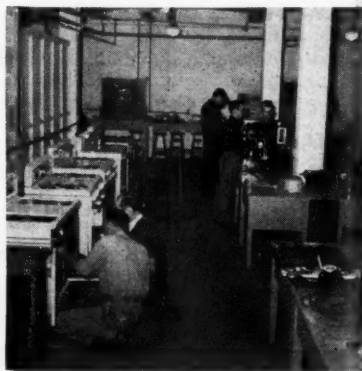
Servicemen Trained at N.C. Gas Tech Course

The demand for well trained servicemen in the industry is being aided through the Institute of Gas Technology at North Carolina State college, Raleigh, N. C. which this year inaugurated a series of nine four-week courses. The next scheduled course begins June 9 at the Institute.

Object of the school, according to J. Frank Seely, director, is not only to provide additional training for men already in the L.P. gas industry but to train new men who wish to make a career in the industry.

The Institute was conceived about two years ago by members of the North Carolina LPGA and the Mid-Southeastern Gas Assn. An advisory committee representing both associations was established to assist in organizing the school.

During the course of instruction the student will test, dismantle, study and inspect, make repairs, reassemble and retest appliances, regulators, meters, controls, valves, etc. A well-equipped laboratory, under supervi-



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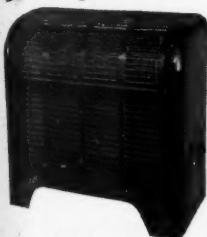
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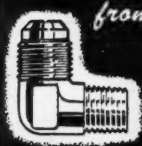
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Instrument Laboratory at N. C. State

sion of Wallace L. Douglass, is equipped with both LPG and manufactured gas. Later, natural gas will replace the latter. All three gases are taught and their applications to the gas industry as a whole, involving 28 subjects.

A staff of four instructors including Mr. Seely, handles instruction. The laboratory is equipped with manufacturer-supplied equipment such as appliances, controls, valves, repair equipment, regulators, pumps and tobacco curing demonstrator.

The remaining four course periods for 1952 will start on June 9, July 14, August 18, and September 29. Those interested in enrollment are advised to contact the College Extension Div., N. C. State college at Raleigh, N. C. Tuition fee is \$100.

Correction

A typographical error in an article in the April issue concerning the Mississippi LPGA meeting wrongly placed William Bambrick, one of the speakers, as Southeastern sales manager of Caloric Stove Corp. Mr. Bambrick is the company's South Central divisional representative and L. H. Ernst is Southeastern sales manager for Caloric, at Atlanta, Ga.